

INSIDE DOPE

by GEORGE F. TAUBENECK

Stories of the Week
Daffynitions
How to Get a Fresh Viewpoint
Didn't Mean To, Boss
Truth Is Stranger
Add Ruth Stories
Maybe You Won't Believe It—

Stories of the Week

A Boston food wholesaler entertained 150 orphans at a picnic recently. It was so dagblasted hot that the kids weren't happy, didn't wanna play games—even were indifferent to sandwiches and potato chips.

Sponsoring wholesaler food purveyor, Rocco Fiorini, saved the situation with a brilliant idea.

Twenty of his refrigerated trucks were dispatched to the picnic site, and parked in a circle around the listless orphans. Rear doors were opened while the truck refrigeration systems blew out blasts of cold air. The kids revived quickly, and the party was a success.

Jim Tranter: please note.

Daffynitions

Vertigo: Vacation problem.
Hopeless case: Twenty-four empties.—Wall Street Journal.

How to Get a Fresh Viewpoint

As a testing ground for your ideas and attitudes, the cheap-seat "bleachers" in baseball parks can be recommended especially.

"Bleacher regulars" see the most games, and know baseball history from Cobb to Mantle.

They'll teach you plenty about our national pastime. And, in the bargain, they'll be enlightening about politics, grass-roots economics, and a lot of other things about which you should be curious.

In the main, they're night-shift workers in factories, restaurants, theaters, transportation, etc. Also, retired gentlemen—plus plenty of young folk. Baseball is their hobby and their recreation.

Bleacher seats not only are cheap, they are sunny. True fans, plus the nocturnal laborers and pensioned gentlemen, realize that they need all the sunshine they can get.

If you'll go there frequently, attired in sport shirt and slacks, you'll find out how "forgotten men" react and think and talk, and you'll have the time of your life. You'll be a better American as a result.

A stadium which houses professional baseball and football is the one place where the CIO and NAM, reactionaries and radicals get together under one tent.

Lads from poor families fill the rosters of the playing personnel. And rich men fawn over them and vie for their autographs.

If Big Shots wooed modest men in other walks of life like they cultivate athletes, they'd be better informed. Scads of 'em, however, won't listen to the Truth even when it kisses them unexpectedly on the nose. True story: A Detroit barber (who prunes and snips hair and whisksers daily in a hotel shop) has a magnificent private customer. Every day he shaves this prominent industrialist in the latter's office suite. Said tycoon preens himself that this barber is his link with the "common people," and asks him how the voters are reacting to this or that every day.

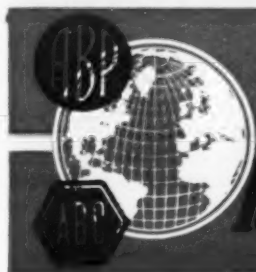
At first the barber told the truth. His candid answers invariably provoked a towering rage on the part of his wealthy patron. Now—to keep his job and prolong the patron's life—he soothes this excellent customer by falsely confirming the latter's prejudices.

Moral: Don't trust an intermediary or "scientific" pollsters. Test the temperature of public opinion yourself now and then by sitting in "the bleachers" and listening.

With this probably pontifical Preface, we introduce "Dope's" annual series of baseball anecdotes. From now on, no pontificating—just fun.

(Concluded on Page 11, Column 3)

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Not ONE But TWO Emerson Companies Entering Room Air Conditioner Field

ST. LOUIS—The Emerson Electric Mfg. Co. here, long-time manufacturer of electric motors and electric fans, has announced that it will introduce a distinctive line of room air conditioners in 1954.

The line will include units in three sizes: ½ hp., ¾ hp., and 1-ton models, all modernly styled and finished, the announcement stated. Further details on the design and construction of the models are not available at this time. There was a hint that the room air conditioners will be designated as the "Emerson-Electric" line.

The company has been a leader in the motor and fan industry since 1890.

All-Industry Show Sellout; Urge Fast Action on Rooms

WASHINGTON, D. C.—The 8th All-Industry Refrigeration & Air Conditioning Exposition is a sellout.

As of Sept. 8, only one booth was still unsold, according to George E. Mills, show director. Thus, the exposition will be by far the largest of its kind ever held.

Persons planning to attend the show, to be staged Nov. 9-12 in Cleveland's public auditorium, are urged to arrange for their hotel reservations as soon as possible.

The Cleveland Convention Bureau is handling all reservations for hotel accommodations. Requests should be made in writing to Housing Bureau, 8th All-Industry Refrigeration and Air Conditioning Exposition, 511 Terminal Tower, Cleveland.

In addition to the exhibitors previously listed in earlier issues, the following companies have signed up for space (booth numbers in parentheses):

Drayer-Hanson, Inc. (920), Flexible Tubing Corp. (748), The Deering Air Conditioning Co. (650), Better-Bilt Mfg. Co. (567), Power-Freeze, Inc. (941), American Emblem Co., Inc. (922), Barr Mfg. Co. (566), Rite Cold Products Co. (652), Automatic Machine Products Co. (581), The Torrington Mfg. Co. (936), Liquid Freeze Corp. (745), Morrison Products, Inc. (832), and Reading Tube Corp. (649).

Bess Heads New Setup With Refrigeration Corp.

NEW YORK CITY—Refrigeration Corp. of America is to be reactivated as a manufacturer of low-temperature cabinets, and John Bess, who headed the company from 1938 to 1947, will again take up the reins as president, according to reports circulated here.

Bess is president of Freshmaster Corp. and a founder of the Freezer Owners Association of America, a freezer-food plan setup.

Refrigeration Corp. of America had made low-temperature cabinets before and after the War, and in 1947 it was sold to Noma Electric Corp., which continued to merchandise its products under the trade name "Frigid-Freeze."

In 1949 Noma sold Refrigeration Corp. of America to Longergan Mfg. Co. of Albion, Mich., contract manufacturer of space heaters and air conditioners. Longergan made and sold Frigid-Freeze cabinets for a while, but gradually dropped out of this business.

Last week Longergan officials said that the Refrigeration Corp. of America and Frigid-Freeze names had been returned to Noma Electric Corp., who apparently in turn has turned them over to Bess.

NEW YORK CITY — Benjamin Abrams, president of Emerson Radio & Phonograph Corp., announces that the company will soon enter the room air conditioner field.

He said the Emerson line will be available to the public well in advance of the summer of 1954.

The line, which will be introduced at a special distributors' meeting early next year, will consist of four models ranging from ½ to 1 ton in capacity, according to Abrams. He added that there is a possibility that a 1½-ton model will also be included.

"While exact prices for our air conditioners have not yet been determined," Abrams stated, "I can say that they will follow Emerson's traditional policy of placing merchandise within the reach of the masses."

Emerson's president emphasized that his company has no plans whatsoever to enter allied appliance fields.

"We will not manufacture refrigerators, washers, or home freezers," he said.

Mark Mooney Heads Sales at Typhoon

BROOKLYN — Mark E. Mooney, formerly vice president and sales manager of Baker Refrigeration Corp., has joined Typhoon Air Conditioning Co. as vice president in charge of sales, according to Don V. Petrone, Typhoon executive vice president.



Mark E. Mooney

Mooney will assume charge of all sales and distribution for Typhoon. Petrone states that this addition to the company's executive staff is in line with the steady and rapid growth of the company.

Mooney is well-known to members of the refrigeration and air conditioning industry, both through his past connections with several of the leading firms in the business, and through his active participation in many trade associations.

From 1937 to 1950, Mooney was with Carrier Corp. in several capacities, including product manager.

Mooney was graduated from Notre Dame university. He has been active in a number of trade societies, including (Concluded on Back Page, Column 5)

60 Companies Exhibiting at Locker Show

CHICAGO — With discussions and exhibits built up around the theme "The Iron Is Hot—Strike Now" for added sales and profits, the annual convention of the National Frozen Food Locker Institute was scheduled to get under way at the Morrison hotel here Sept. 13. It runs through Sept. 16.

More than 60 manufacturers were to exhibit, having signed up for 90 booths, according to Robert L. Madeira, executive secretary of NFFLI. Of these 20 are manufacturers of home freezers and refrigerated equipment, he said.

A new feature, the "Avenue of Brands," has been devised for the exhibits. Here will be concentrated many well-known brands of commercial frozen foods and specialties.

Educational program for the convention will cover a variety of topics and will include such speakers as William Bles, vice president of Avco Mfg. Corp., and John Fox, president of Minute Maid Corp.

"Early bird" sessions are scheduled on locker plant operational problems, (Concluded on Back Page, Column 4)

C. V. Hill & Co. Elects C. V. Hill, Jr. Pres., Ups Stewart, McPhail

TRENTON, N. J.—J. Stuart Hill moves from the presidency to the newly created office of chairman of the board of C. V. Hill and Co., Inc., with his brother, C. V. Hill, Jr., shifting from vice president to president, as the result of the recent regular meeting of the company's board of directors.

In the same move, Herbert A. Stewart, formerly vice president of manufacturing of Savage Arms Corp., Utica, N. Y., was elected vice president to fill the post vacated by C. V. Hill, Jr., and H. R. McPhail, also from the Savage organization, where he occupied a similar position, was elected works manager.

The appointment of E. H. Payer, of Detroit, to the newly established office of controller, and the continuance of Earl J. Kressler, treasurer, and S. T. Joiner, secretary, in their present positions were also announced.

Both Stewart and McPhail bring to (Concluded on Page 4, Column 5)

High Distribution Costs Seen Hindering Future Growth of Frozen Food Industry

WASHINGTON, D. C.—The future expansion of the frozen food industry is seriously handicapped by an inefficient and costly distribution system, two agricultural economists in the Farm Credit Administration of the U. S. Department of Agriculture discovered recently.

In a report on "Merchandising Commercial Frozen Foods by Locker Plants in 1952," they declared, "Under present conditions there are too many steps in the distribution process. Frozen foods are often warehoused three to six times before reaching the retail store. Frequent and long distance wholesale delivery of small orders also results in high distribution costs."

"Methods of reducing some of these excessive costs are badly needed. An encouraging factor is the expanded use of home freezers and locker plants by consumers who purchase

frozen food in bulk quantities at less than retail price.

"Likewise, locker plants, distant from large distributing centers, may act as local storage and wholesale distributing points for commercial frozen foods in their nearby areas. They may offer additional possibilities for economies in transportation and distribution."

Authors of this report are L. B. Mann and Paul C. Wilkins, who give credit to the National Frozen Food Locker Institute and its members for cooperation in the study.

In their study, they collected information on the location of locker plants merchandising commercial frozen foods, volume and type of sales, margins, discounts, merchandising practices, use of display cabinets, and extent of delivery service.

Information was also collected on (Concluded on Back Page, Column 1)

New Action Is Taken To Stop Icebox Deaths

Dealers and Associations Offer To Remove 'Junkers'; Some Cities Pass Laws

DETROIT—Reaction to the recent wave of children's deaths in abandoned refrigerators has continued in the past fortnight, with more municipalities passing laws imposing penalties for abandoning refrigerator cabinets without the door latches being removed, and refrigeration dealer and service

Scouts Distribute Posters

DETROIT—Readers of AIR CONDITIONING & REFRIGERATION NEWS were quick to react to our "Don't Kill a Child" poster, appearing in the Aug. 31 issue. The poster was intended as a reminder to dealers and servicemen to disarm old refrigerators before they junked them.

W. C. Mueller, advertising manager of Dole Refrigerating Co., wrote to request reprints of the poster, and outlined this plan for using them:

"I am a scoutmaster with quite an active little troop," he wrote. "As a project we could map out dangerous areas in our locality and carry out a controlled canvas, posting your reprints in conspicuous and effective places."

"This would require about 2,000 reprints for our particular locality, but I believe the demand would grow, as other troops are contacted and asked to join the movement."

The requested reprints have been sent to Scoutmaster Mueller, and to others requesting them. (See also "Off The Chest" page.)

associations voluntarily acting to take old cabinets out of circulation, or at least have the doors removed.

Communities which passed local ordinances covering the problem were Birmingham and Montgomery, Ala., and Richmond and Portsmouth, Va. The ordinances all read about the same, making it unlawful for any person or corporation to leave any abandoned refrigerator or icebox without first removing the doors. The Portsmouth ordinance had a variation in that doors could be left on if they were chained and padlocked or otherwise sealed.

Refrigerator dealers, individually and collectively, were making what moves they could to prevent further (Concluded on Page 4, Column 4)

Mercury Soars, But Cooling Cuts Absenteeism at Plant

JANESVILLE, Wis.—Parker Pen Co. here credits air conditioning for a 23% drop in worker absenteeism during a recent August week when the mercury soared into the 90's.

The air conditioned plant lost only 123 man-days in absenteeism that week, compared with 159 lost-time days during a preceding week in the same month when the weather was comparatively cool.

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W. F. Bakke, president, Sub-Zero Freezer Co., second from left, discusses plans with Jack Banfield, William Patton, Frank Benfield, and D. R. Collins, all of Banfield's, Inc., Sub-Zero distributor in Tulsa, during the recent open house at the new Sub-Zero plant in Madison, Wis.

Sub-Zero Freezer Holds Open House at New Plant Designed To Double Output

MADISON, Wis.—Sub-Zero Freezer Co., Inc., opened its second plant here recently for inspection by the firm's distributors and representatives of the press. Groups were conducted on tours through the new plant by W. F. Bakke, president; L. C. Bakke, vice president; and A. H. Rose, sales manager.

The new Sub-Zero factory is a modern, straight-line production plant, designed to more than double the previous output of Sub-Zero freezers in the company's original factory. W. F. Bakke explained that the capacity of the first plant was insufficient to meet the increasing demand for Sub-Zero freezers, and necessitated the

undertaking of an expansion program last fall. Full output in the new plant is rapidly being reached, and production goals are expected to be met this fall.

Sub-Zero Plant No. 2 is a modern, one-story building, housing offices, a sales and display floor, and the most modern equipment for fast, efficient production methods. Plant No. 1 will continue to produce freezers and milk coolers.

As soon as all decorating, landscaping, and finishing touches have been completed, a grand opening for the general public is planned to show area residents its newest industrial addition.

Amana Freezer Featured In 'Saturday Evening Post'

AMANA, Iowa — Amana freezers will be featured in the "Show House," a new series of integrated home products advertisements, tied in with a newly-designed home, that debuted in the *Saturday Evening Post* Sept. 12, it was announced by Merlin E. Morris, Amana's advertising manager.

The four-color, two-page spread contains an exterior view and a sketch plan of a seven-room ranch home, and in addition, 10 detailed close-up views which highlight the products of different manufacturers. Pictured in the ad are singing star Dennis Day and his wife.

The Amana 18-cu. ft. upright freezer is shown installed in the kitchen.

The ad carries a coupon which offers literature from each of the 10 participating companies. Amana offers Post readers "The Story of Freezing." To capitalize on the promotion, dealers are being offered merchandising aids.

Death Claims Stancliff, 49, G-E Production Coordinator

ERIE, Pa. — Leonard R. Stancliff, 49, former assistant production manager in refrigeration at the General Electric Erie Works, died in Louisville, Ky., recently.

Stancliff lived in Erie prior to August, 1951, when he was transferred to the Louisville plant of G-E. He was production coordinator there.

Humidity Control Stops Punched Card Curling

BATTLE CREEK, Mich.—Besides greatly improving personal comfort, the air conditioning system installed in the executive office building of the Kellogg Co.'s main plant here has eliminated the curling and stretching of punched cards used in automatic tabulating equipment.

This trouble resulted from the tendency of paper and cards to absorb moisture from damp air, causing them to warp so that it was difficult to run them through the machines.

Two Kathabar Units, manufactured by Surface Combustion Corp., combined with heating and cooling coils, automatically maintain inside condition at 78° F. and 45% relative humidity regardless of the outside variations in humidity and temperature.

More Than 500 Fedders Dealers, Salesmen May Get Florida Trip

NEW YORK CITY—More than 500 Fedders room air conditioner dealers and dealer salesmen are expected to qualify for the deluxe holiday in Hollywood, Fla., Nov. 8-12, according to Edward Becker, sales manager for the northeastern district.

"We believe this will be the largest regional dealer trip ever conducted for an air conditioner sales force," Becker said.

Set up on a sales contest basis, the trip is open to all Fedders dealers and their salesmen in the area extending from Maine through Virginia. It is sponsored jointly by the company and its distributors.

Chartered Eastern Airlines "Super Constellations" will fly the guests directly from Boston, Newark, New York, Philadelphia, and Washington, D. C., to Miami. Reservations will be at the Hollywood By The Sea hotel where a complete program of game-fishing, golf, entertainment, and cocktail parties has been arranged.

At the conclusion of the festivities, distributors will remain for a one-day meeting, Becker said.

Magaziner Returns as Bally Sales Engineer

BALLY, Pa.—Bally Metal Products, Inc., announces that Gilbert Magaziner, former sales engineer in New York and several northeastern states, has returned from military duty and resumed his prior activity.

Magaziner was recently released from active duty after two years of service as an Air Force captain. This was Magaziner's second period of active service, having previously served during World War II.

Bally Metal Products is a subsidiary of the Bally Case and Cooler Co., and has plant facilities for porcelain and metal fabrication. Magaziner's appointment was announced by George M. Prince of the parent company, which manufactures refrigerated display cases and coolers.

Nash-Kelvinator Pays Dividend

DETROIT — Directors of Nash-Kelvinator Corp. recently declared a quarterly dividend of 50 cents a share on outstanding capital stock payable on Sept. 25 to stockholders on record Sept. 4.

Hall To Direct Sales At Harder-Freez Div.

NILES, Mich.—William S. Hall, long prominent in the refrigeration and appliance fields, has been appointed to the newly-created post of director of sales, Harder-Freez Div., Tyler Fixture Corp., according to R. L. Tyler, president.



William S. Hall

Tyler also announced that Robert Tyler, Jr. becomes assistant sales manager and Hugh Cooper remains as sales manager in the Harder-Freez reorganization, effective immediately.

Hall comes to Harder-Freez from his recent position as assistant general sales manager, Deepfreeze Appliance Div., Motor Products Corp. He has been active in refrigeration and appliance circles since 1934, at the retail, distributor, and manufacturing levels, and is fully acquainted with electrical refrigeration engineering, sales, and service operations.

Robert Tyler, Jr., a Dartmouth graduate, joins the Harder-Freez Div. following a varied background in production, administration, and sales, most recently as divisional manager for Tyler in the central territory.

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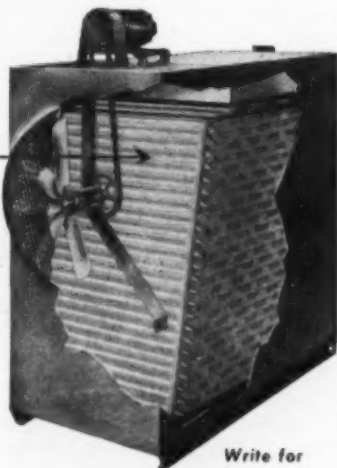
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Carrier Announces \$10 Million Program For Expansion

SYRACUSE, N. Y.—A \$10,000,000 expansion program involving the construction of a new plant in the south and extensive additions to present facilities in Syracuse was announced recently by Cloud Wampler, president of Carrier Corp.

The building of the southern plant is the first step in a long-term program that calls for other facilities that will bring production closer to major markets, he said.

It is expected that most of the new capital required will be obtained through a pre-emptive rights offering to common stockholders. A registration statement covering approximately 170,000 shares of \$50 par value convertible preferred stock was filed Sept. 4 with the Securities and Exchange Commission.

Subject to the effectiveness of the registration statement, the offering is scheduled to be made on Sept. 22 with the subscription rights expiring on Oct. 6.

The proposed southern plant will cost in the neighborhood of \$5 million. It will be devoted to the manufacture of so-called unitary products, such as room air conditioners, year-round residential air conditioning equipment, and self-contained units for use mainly in relatively small commercial establishments.

The additions to Syracuse facilities will include office, laboratory, warehouse, and storage space. The new buildings will be constructed adjacent to the existing main plants of the corporation and will increase the production of unitary equipment.

"Our company has spent more than \$18 million during the past six years for new or additional facilities," Wampler pointed out. "But even so, still more capacity is needed in view of the tremendous demand for air conditioning equipment, especially for use in homes. Consequently, almost all of the new capital sought at this time will be used in connection with the development, manufacture, and sale of unitary products."

The proposed offering to the common stockholders of Carrier will be underwritten by a nationwide investment banking syndicate.

Hollow Beams, Girders Serve As Cooling, Heating Ducts

NEW YORK CITY—A novel use of hollow steel beams and girders to do double duty as air conditioning-heating ducts is explained in the current issue of *Architectural Forum*.

The building described is a two-story office structure. Similar welded hollow beams and columns have previously been used successfully in a seven-story building in Athens, Ga. Difference is that fireproofing is not required in the two-story building. The steel is merely painted, thus lowering the installation cost.



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'Tide' Panel Says Home Cooling Top 'Necessity for Tomorrow'

NEW YORK CITY—Listing preferences for the products which might become "the necessities of tomorrow," *Tide* magazine's 200-member Leadership Panel put residential air conditioners at the top of the list.

According to an article in the Aug. 29 issue of the publication, the panel's preferences were as follows:

Home air conditioners, 98%; automatic transmission, 93%; automatic dishwashers, 85%; home freezers, 81%; automatic clothes dryers, 75%; garbage disposal units, 74%; and power steering, 60%.

Pharmacy Cooling Job Pays Way by Cutting Pay Roll

ELLIOTT, Pa.—Sid Silverman, whose Elliott Pharmacy here is now air conditioned, figures the cooling job won't cost him anything.

Located on a "hot corner," the store absorbs an awful lot of heat in the summer. But since he is no longer exhausted by daytime heat, thanks to air conditioning, Silverman can release his pharmacist. That alone will pay for the installation.

A 30-in. metal awning was fashioned and erected outside the window where the air conditioning units were to protect them from the sun.

Freezer Owners Buying More Frozen Foods, Survey Shows

ITHACA, N. Y.—Home freezers are here to stay, a new Cornell university survey shows.

The survey, made by the college's School of Nutrition, reported on 600 Tompkins county families who were enabled, through the school, to get freezers before they went on general sale.

Interviews made a year later and again last fall showed that families do less home freezing and buy more commercially frozen products, the school reported. Other findings were as follows:

Families are freezing more baked goods; all but nine families said the freezer had "paid its way"; all praised the convenience of freezers; most families defrost the freezers once a year, a few do three times a year, and a few have never defrosted them.

The school survey reported that 30% of the families had "unpleasant experiences" with frozen food, but that this was usually because of improper freezing methods.

The school noted that most of the features criticized have disappeared from later model freezers, but pointed out the big problem of easier defrosting of home freezers is still unsolved.

Philadelphia Area Distributors Sell 3,854 Air Conditioners During July

PHILADELPHIA—Appliance distributors in the five-county area around Philadelphia sold 3,854 air conditioners during July, running their total for the first seven months of the year to 24,237, the Electrical Association of Philadelphia reported recently.

Among other appliances, only water heaters sold in greater volume during July than in the same month of 1952. They gained 16% for the month. For the first seven months of the year, water heater sales were 23% higher than in 1952.

Range sales for July were down 7% from last year, refrigerator sales down 20%, freezer sales 28%, dryers down 46%, and dishwashers down 76%.

For the seven months period as compared with the same period last year, freezer sales were up 22% and range sales up 12%. Refrigerator sales were down 1%, dryers down 18%, and dishwashers down 26%.

The association's report covered sales in Bucks, Chester, Delaware, Montgomery, and Philadelphia counties, all in Pennsylvania.

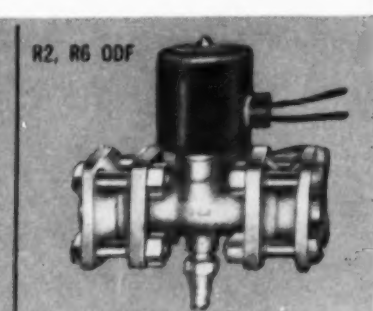
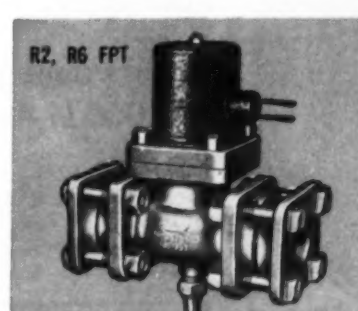
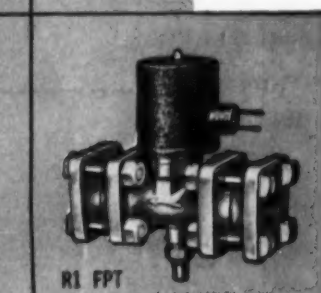
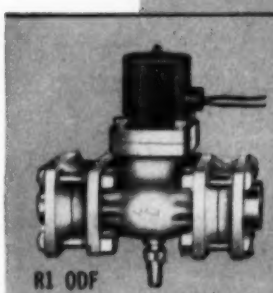
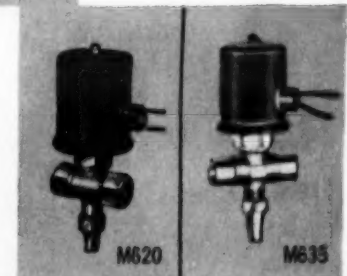
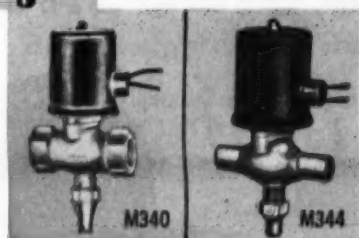
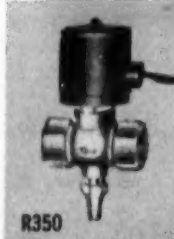
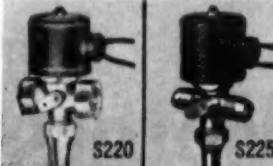
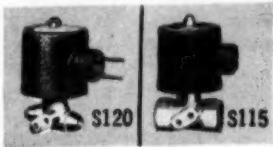
Electric Appliance	July-1953	July-1952	Total Jan. to July 31, 1953	Total Jan. to July 31, 1952
Air Conditioners	3,854	..	24,237	..
Clothes Dryers	407	749	4,211	5,116
Dishwashers	278	1,148	2,515	3,395
Home Freezers	1,074	1,483	8,533	6,991
Ranges	1,479	1,579	8,737	7,771
Refrigerators	8,743	10,849	45,263	45,689
Television	8,879	11,885	75,269	78,712
Water Heaters	978	836	5,855	4,753

Sans Expands Activities

JAMESTOWN, N. Y.—The Sans Corp. has announced expanded activities providing complete commercial, industrial, mercantile, and institutional sales and services.

Refrigeration Co. Incorporated

BUFFALO—Refrigeration Co. Inc. has been incorporated here with capital of 100 shares. Incorporators are Max E. Dozoretz, Sarah Dozoretz, and Bernard Edelman.



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ALCO VALVE CO.

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Northwest Dealer Group To Hold 'Profit Clinic' In Seattle Sept. 28

SEATTLE — A day-long "Profit Clinic" planned to provide information that will help appliance and television dealers show a better profit will be held at the Norway Center here Sept. 28 under sponsorship of the Northwest Appliance & Television Association.

The program for the clinic, the first event of its kind to be staged in the Pacific Northwest, calls for talks by Mort Farr of Upper Darby, Pa., past president of the National Appliance & Radio-TV Dealers Association; Phil Urner of Bakersfield, Calif., a vice president of NARDA; Al Bernsohn, managing director of NARDA; Al Robertson of Oklahoma City; Wallace Johnston, president of NARDA; Ed Nystrom; and Kip Anger, sales training manager for Motorola.

There will also be a forum on consumer discount buying and panel discussions for salesmen, TV servicemen, and major appliance servicemen. In addition, a general panel discussion with all speakers participating is scheduled.

Besides the morning and afternoon sessions, the clinic will include breakfast and luncheon meetings and a banquet in the evening. Registration and a reception given by Seattle distributors will start at 6 p.m., Sept. 27.

JUST ASK US!

Use Key No. for fastest service of this issue.

Cheyenne Dealer Sues Utility When Power Fails at Grand Opening

CHEYENNE, Wyo.—A suit filed in District Court here by a local appliance dealer against Cheyenne Light, Fuel & Power Co. charged that negligence on the part of the utility resulted in power failure during the grand opening of the dealer's new store.

The dealer, Harold Holmes, asked damages totaling \$3,800.

Holmes claimed that although he gave the power company advance notice of his intention to open the new store last April and had requested proper electrical service, the utility failed to provide adequate transformers to handle the heavy load it was known would result from the demonstration of many appliances.

Attendance and sales were at a peak during the grand opening of the store, Holmes stated. He alleged that a power failure occurred about 8 p.m. and that electrical service was not restored until two hours later. By that time, he declared, most of his customers had left the store.

Six-Month Sales, Profits Up For U. S. Thermo Control

MINNEAPOLIS — Net sales and net profit of U. S. Thermo Control Co. here in the six months ended May 31 topped year-ago levels, the company reported.

Net sales totaled \$3,856,025, against \$3,375,388 in the like period of 1952. Net profit amounted to \$223,359, compared with \$167,073 a year ago.

I-H 2nd Quarter Sales Up 20% over Last Year

CHICAGO—Sales of International Harvester refrigeration equipment and service parts in the quarter ended July 31 totaled \$14,865,000, up about 20% from the \$12,449,000 volume done in the like period a year ago, the company reported.

However, over-all I-H sales in the 1953 quarter declined slightly, totaling \$324,789,000, compared with \$333,071,000 in the corresponding 1952 period.

In the nine months ended July 31, sales of all I-H products amounted to \$999,764,000, against \$981,473,000 in the comparable period of last year. Nine-month profits were \$38,517,000, or \$2.56 a share, compared with \$38,442,000, or \$2.57 a share, a year earlier.

Walter Kuenzli of Avco Dies While Vacationing in Florida

CINCINNATI—Walter A. Kuenzli, assistant to the chief of appliance engineering at the Avco Mfg. Corp., died while vacationing in Miami Beach, Fla., it has been learned here. He was 51.

Kuenzli had been with Avco Mfg. Co. since 1950, and prior to that had been associated with Servel Refrigerator Co. for many years. He had been active in the affairs of the American Society of Refrigerating Engineers, and had taken a prominent role in several of the Domestic Refrigeration Engineering Conferences held in recent years.

His wife and two children survive him.

Death Trap Action -- C. V. Hill--

(Concluded from Page 1, Column 5)

"refrigerator death trap" tragedies.

George B. Bates, president of the Memphis Retail Appliance Dealers Association, informed the NEWS that his association, working in cooperation with the *Memphis Commercial Appeal*, has picked up and destroyed more than 200 worn out boxes since the death of the five Hallman children across the river in Arkansas last month.

"The metal boxes are being sold for \$10 per ton and the money is going into a fund for this family," he said.

He credited Paul Mulloy of the *Commercial Appeal* as being the "first person to conduct a campaign for the picking up and destroying of old boxes" in Memphis.

In Tallahassee, Fla., appliance dealers joined hands with a local junk dealer in a drive to put abandoned refrigerators out of the reach of young children. Hugh Mays, one of the dealers, said he had junked about 75 used refrigerators which formerly stood in the open, near his place of business.

"It's one of those things which we all may have thought about at some time, but don't do anything about until a tragic happening focuses our attention on it," he said.

Joe Cooper, the Tallahassee scrap dealer, said he was taking every precaution in handling the discarded units in his scrap yard. He said children were prohibited from playing in the scrap yard, and a night watchman is on duty when the business is closed. Old units are burned and pressed into scrap as soon as possible after a load is received, Cooper said.

A number of dealers apparently were making individual efforts to rid their communities of the menace of abandoned refrigerators, using advertising and other promotion means. The offer of help was usually in the form of a promise to answer any request to visit a home or other place and either remove the abandoned refrigerators, or to remove the door or hinges.

'Philco Radio Playhouse' Set for Debut Sept. 30

NEW YORK CITY—A new weekly radio drama, "The Philco Radio Playhouse," will make its debut over the American Broadcasting Co. network Wednesday, Sept. 30, under the sponsorship of Philco Corp.

The program will be inaugurated as a part of Philco's fall season advertising campaign. It will be a half-hour Wednesday evening broadcast from New York, 9:00-9:30 p.m., EST, in the eastern region and from 8:00-8:30 p.m., Standard Time, in all other time zones.

The program will include adaptations of the best presentations which first made their appearance on the "Philco Television Playhouse." Each of the radio dramas will feature many of the same players who appeared on television shows.

Joseph Cotten, star of stage and screen, will act as producer and narrator. The 52-week contract calls for presentation of the program over more than 300 ABC radio stations.

Buffalo Bank Invests \$10,000 In Air Conditioning

BUFFALO — Buffalo Industrial Bank is spending \$10,000 for air conditioning. It will be the second air conditioned bank in downtown Buffalo. First National Bank also has it.

(Concluded from Page 1, Column 4)

the company broad experience in refrigeration and general manufacturing. The former has been with Savage for 16 years, and until his coming with Hill, directed the manufacturing operations of all its divisions, including refrigeration, firearms, and lawn mowers. McPhail has been works manager and engineering director of Savage's refrigeration division for the past five years, succeeding Stewart in that post when the latter was made vice president of manufacturing.

In no sense a reorganization, the moves were planned as a means of providing the company with sufficient executive manpower to cope with growing production problems resulting from Hill's rapid expansion during the postwar years. One of the commercial refrigerator industry's pioneers, the company was founded by the late Clement V. Hill, Sr., in 1889. In April, 1950, all the common stock of the company was purchased by Savage Arms Corporation, as a step in its own expansion program, with the former management and policies continuing intact under the direction of the founder's two sons.

White's Appliance Files Name

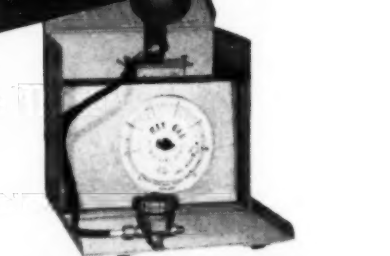
BUFFALO—A business name has been filed in the Erie County Clerk's office for White's Appliance Co., 3293 Bailey Ave., Buffalo, by Louis A. Migliore, Samuel A. Migliore, and Charles LaMendola.

CORKBOARD

- Steam-Baked
 - Price—20% Lower
 - Fed. Specif. H. H.-C561B
- WRITE FOR PRICES

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55 W. 42nd St., New York 18, N. Y.
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IT'S NEW — IT'S ACCURATE
"WAY-GAS" REFRIGERANT
CHARGING KIT



Speeds Up SERVICING — Saves GAS . . .

Designed to charge small hermetic systems from a 5 lb. drum. Why be a "frost-line" feeler, when you can accurately determine the exact charge on a special, visible scale with a moveable dial calibrated in ounces? Amount of charge can be read directly on dial. Gross weight capacity — 11 lbs. Scale accurate to 1/2 ounce. Compact metal carrying case folds to 11 inches square. Shipping weight, 17 lbs.

See your Supplier Jobber or Order Direct

Complete as illustrated, less drum \$3950 F. O. B.

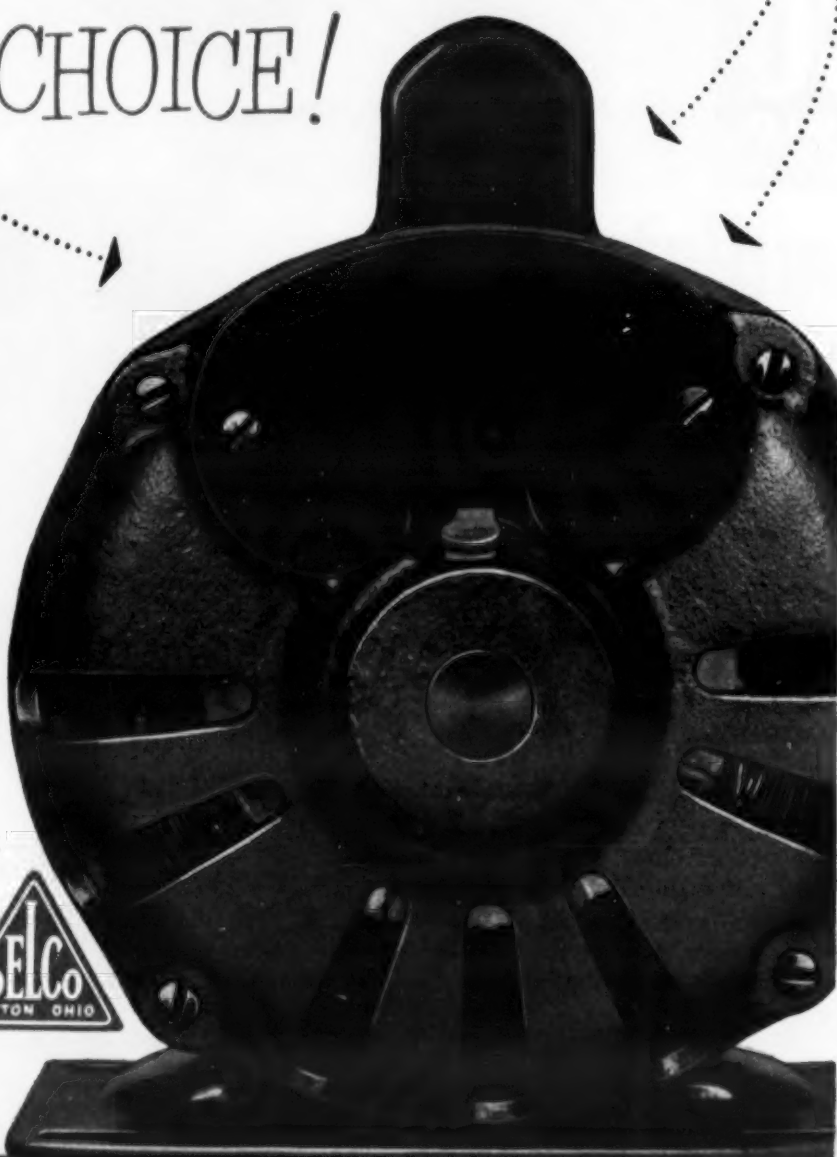
SERVICE PRODUCTS CO.
Box 963 — Station A
ALLIANCE, OHIO

ruggedness makes **Delco Motors**
FIRST CHOICE!

What's different about Delco motors? Just this: Delco motors stay on the job . . . keep going on and on. Appearances, you see, can be deceiving. Motors often look and operate alike at the start, but Delco motors have stood — and will stand — the test of years in operation. That's why more and more manufacturers of air conditioning and refrigeration units are using Delco motors. That's why you'll be wise to get full information regarding these rugged, reliable motors at your first opportunity. Write Delco Products, Dayton, Ohio, or contact our nearest sales office.

DELCO PRODUCTS

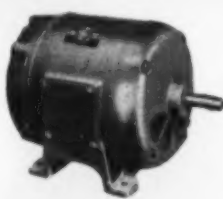
Division of General Motors Corporation
Dayton, Ohio



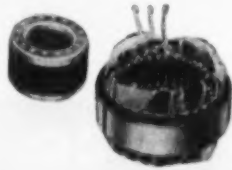
The Best Running Mate Your Product Can Have!



Delco Single-phase Fractional HP Motors. Repulsion-start, 1/8 through 1/2 hp. Capacitor-start for blowers and open type compressors, 1/8 through 1/2 hp.



Delco Integral HP Motors. Single-phase, repulsion-start, 1 through 5 hp. Polyphase, 1 through 100 hp.



Delco Hermetic Motors. Split-phase, capacitor-start, capacitor-start-and-run. Also polyphase, 1/8 through 15 hp.



Delco Condenser Cooling Fans. 1/250 through 1/80 hp.

SALES OFFICES: ATLANTA • CHICAGO • CINCINNATI • CLEVELAND • DALLAS • DETROIT • HARTFORD • PHILADELPHIA • ST. LOUIS • SAN FRANCISCO

Attention Frigidaire Dealers

Now You Can Increase Reserve Storage Capacity of FRIGIDAIRE ICE CUBE MAKERS from 100 pounds to 300 or 500 pounds with the New ADD-A-BIN Storage Units!

We Supply Everything You Convert in less than an hour No Cutting Necessary

A DUNHILL PRODUCT

Write — Phone for Details

N. SILVERMAN

National Sales Office, 37 W. 57th St., New York, N.Y.
Phone PL. 5-5973

Air Conditioned Churches Up Attendance, Collections

NEW YORK CITY—Increases as high as 50% in church attendance and collections are attributed to air conditioning, according to a recent survey reported in the current issue of *Architectural Forum*.

Over 5% of all U. S. churches with seats for more than 100 persons have installed cooling systems, most since 1950 and mostly in the Southern states. About 3% of these churches have refrigerated air conditioning. The First Baptist Church of Waco, Texas reports that after air conditioning, its membership grew so large that its yearly budget increased \$50,000.

Prices All That's Hot In Air Conditioned Market

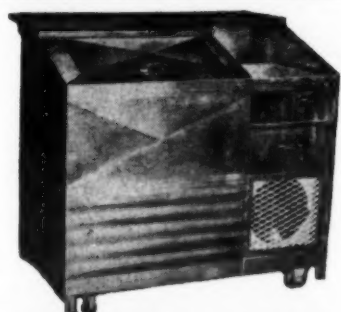
ALBANY, N. Y.—"The Only Thing Hot In Our Store Is Our Prices."

That was the theme of a newspaper advertisement used by Fred's Star Super Market, Westmere Plaza, to emphasize the store's new air conditioning system.

The store also played up its huge self-service beverage cooler, pointing out it holds more than 1,400 quart bottles of cold beer and soda. "Always a cold case available for those sudden parties at no extra cost," read ad copy.

Gregory Heads Houston ACC

HOUSTON, Texas—K. S. Gregory is the new president of the Air Conditioning Contractors of Houston, it was announced. Other new officers are Sid Atlas, vice president, John Fontana, treasurer, and L. P. Blankenship, secretary.



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PORTABLE — REFRIGERATED
Stainless Steel HOMEBAR
PLASTIC CHARTREUSE FRONT
BLACK TOP

Mfd. by

United Friguator Engrs.
Menominee, Mich.

Write for free 8" x 10" Photos

Cold Wall Milk Tanks Approved for Measuring Bulk Milk In Penn.

HARRISBURG, Pa. — William S. Livengood, Jr., secretary of internal affairs, announced recently that a greatly improved method of storing and measuring fluid bulk milk on the farm has been approved for use in Pennsylvania.

"Working in cooperation with the Pennsylvania milk control commission and other state agencies, the bureau of weights and measures has established regulations under which farmers can install and use cold wall farm bulk milk tanks as measuring devices for their milk," Livengood stated.

"This new method will go far toward assuring the public of a good, healthful supply of milk while at the same time it will eliminate much of the present drudgery on dairy farms.

"As this method comes more and more into use on our dairy farms, it will mean that our milk will never see the light of day from the time it comes from the cow until it is finally poured from a container into a glass for us to drink," he stated. "This will absolutely eliminate almost all possibility of contamination."

Cold wall farm bulk milk tanks have been in use for a number of years, particularly in the far west. It is only recently that the first tanks were installed on Pennsylvania dairy farms.

They not only provide a way of cooling the milk from the time it comes from the cow, but also replace the old-time milk cans as a way of measuring the milk the farmer sells.

Each tank, when installed, will be equipped with a metal measuring stick which will determine the quantity of milk he has stored in his tank. Instead of being hauled to the processing plant in cans, the milk will be pumped from the farm tanks into refrigerated tank trucks for transportation to market.

Milk dealers, who are changing to this new collection system in cooperation with dairy farmers, said this new method will greatly increase sanitation on dairy farms by permitting the cooling of the milk from the time it comes from the cow until it reaches the consumer.

Arbuckle Represents B & G

CHICAGO—Lawrence L. Arbuckle has been named Bell & Gossett Co.'s territorial representative for heating and industrial equipment in southern Alabama, western Florida, and lower eastern Mississippi, reports W. A. Boone, assistant sales manager. Arbuckle formerly was manager of the company's refrigeration division.

To Replace Burned Out Factory

Universal Metal Fabricators Buys New Plant; Will Build Heating Units for Jackson & Church

SAGINAW, Mich.—George E. Osborn, president of Universal Metal Fabricators, Inc., manufacturer of electric milk coolers of various types, milk house wash tanks, freezers, and other fabricated sheet metal products, has announced the purchase of a new plant at Carrollton to replace the factory that was leveled by fire in July.

With the new building providing more than double the manufacturing space lost in the fire, the Saginaw firm will acquire a contract to build and assemble warm air heating units for Jackson & Church Co., the building's previous owner.

O. J. Murphy, UMF secretary and assistant manager and formerly director of purchases for Jackson & Church Co., is well acquainted with furnace production.

Universal Metal Fabricators, Inc., was organized last January to take over the business and assets of Schultz Bros., Inc. Plans called for greatly expanded production of a wide range of sheet metal products and progress toward this goal had been highly satisfactory, when on July 9, minutes after the company closed an agreement for its largest single order, the main plant was swept by a blazing inferno that destroyed property and equipment valued at \$300,000.

Fire started in a small area of the boiler room about 12:45 p. m. and quickly spread throughout the 250

by 80-ft. main structure. Ironically, workmen at the plant thought at first that they had the fire well under control.

The plant superintendent, Donald Dupree, one of the several employees who remained on duty in the plant over the lunch hour recalls, "Five or six of us grabbed fire extinguishers when we first noticed the fire, and it looked like we had it under control. I went to call the fire department just in case, but when I returned, it looked like they would make a needless run."

"Then suddenly, 'whoom,' it just sort of exploded into flames and began to race along the walls and out into the plant." So fast was the progress of the flames that they spread throughout the main plant before the firemen could arrive.

While the main plant of Universal Metal Fabricators was almost a total loss, three other company buildings, housing the offices, the paint shop, and the machine shop, were virtually untouched. Workmen were able to salvage some equipment and about 30 newly manufactured milk coolers stockpiled just west of the main building.

Shortly after word spread that the main plant had been leveled by fire, offers of assistance of all kinds came from every direction.

As a result of these offers, the company was soon installed in temporary quarters where they were able

to maintain partial production while the search for new manufacturing facilities went on.

With the purchase of the new plant, production will soon be back to normal. Some production, Osborn said, will continue at the old site for the present. "We will be operating at both plants until we can coordinate all production at the new Carrollton plant before disposing of the old site."

Osborne expects to double the firm's present payroll of 45 employees and increase production capacity by more than half within a year.

Air Conditioning, Heating Sales, Service Firm To Distribute Airtemp In Canton

CANTON, Ohio—Formation of Air Conditioning-Heating Sales & Service Co. here has been announced by William M. Herbruck, manager.

The firm's opening advertisement in the local newspaper announced its appointment as exclusive Stark County franchised dealer for Chrysler Airtemp. The company is located at 919 12th St., N.E.

The organization offers guaranteed service by its own engineers on all makes of air conditioning and heating equipment. All installations are made by the firm's own electricians, plumbers, and sheet metal workers, and serviced by its mechanics.

Prior to forming the new company, which is incorporated, Herbruck was sales manager of the York Div. of Canton Hardware Co. for a number of years. He has been active in the heating and cooling business locally for the past eight years.

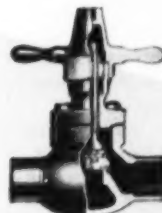
Every Henry Valve, Drier and Strainer
is constantly being improved to retain
the confidence of the Air Conditioning
and Refrigeration Industry in the
complete line of Henry products.

HENRY

VALVES, DRIERS & STRAINERS



Relief Valve



Wing Cap Valve



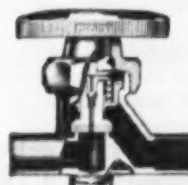
Drier



Ammonia Valve



Packless Valve With
Balanced-Action
Blue Bonnet Type



Packless Valve With
Balanced-Action
Standard Type



"Y" Strainer



Angle Type Drier



Henry Valve Co.

Melrose Park, Illinois (Chicago Suburb)
Cable: Hevalco, Melrose Park, Illinois

Valves • Driers • Strainers • Control Devices and Accessories for Refrigeration • Air Conditioning and Industrial Applications

Barkow

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NOW . . . every homeowner's dream come true. Featuring "Simplematic" control, the "Weatherwise" offers ideal indoor climate. The "Weatherwise" by BARKOW, engineered by a pioneer in the refrigeration field, offers packaged 2 and 3 ton Air Conditioning units for the home. Send for details of the BARKOW "WEATHERWISE" Air Conditioning units, that mean more profitable sales for you.

refrigeration division

Aug. G. Barkow mfg. co., inc.
2230 south 43rd street, milwaukee 15, wisconsin

7 Guesses on What's Ahead for Appliance Field Offered by California Distributor

SAN FRANCISCO—Seven guesses as to what's ahead for the appliance industry were offered at the 18th annual conference of the International Association of Electrical Leagues by Kenneth L. Hampton, manager of Valley Electrical Supply Co., Fresno, Calif. They were:

"Guess No. 1—Long term selling will continue.

"Retailers specializing in the business of credit granting over long terms will account for an increased per cent of the total sales of refrigerators, laundry equipment, and television. These houses will get list prices or, through carrying charges, higher than list prices.

"Manufacturers will continue to advertise national prices on these products.

"Guess No. 2—Specialty stores will do the bulk of the volume of business on appliances in the introductory or low saturation stage of market acceptance.

"To accomplish this, manufacturers will drop their national pricing policy and will price in relation to area market acceptance so specialty stores can compensate sales activities adequately for the work that must be done to move these appliances into the market place.

"Guess No. 3—Plumbing dealers will become an increased factor in this business. They will add dishwashers, disposals, electric water heaters, and some laundry equipment.

"Guess No. 4—The electric utilities will again direct more of their attention to the promotion of electrical appliances, and their approach will be on a mass educational basis that will help the whole industry. They will put their emphasis on the less accepted items and thereby help the manufacturer's low saturation items and the specialty dealers most.

"Guess No. 5—The electrical appliance industry will continue to grow and be profitable for retailers to engage in.

"Its growth will be assured because (a) population increases and our high living standards will continue; (b) the tremendous research and development program of the electrical industry will continue to develop and refine new applications and products; (c) the electric utilities will devote greatly increased educational and promotional efforts to developing their residential revenues.

"Guess No. 6—Standard lines of refrigerators, washers, television receivers, and electric ranges will contain fewer models, but we may go through a period when colors are optional.

"Guess No. 7—New designs will soon obsolete many of our present appliances. For example, refrigerators may become cupboard space as indicated by General Electric Co.'s model shown at the Furniture Market in Chicago last year. Or perhaps dishwashers may become above sink level devices and drain into existing plumbing, etc.

"I foresee changes in most appliances as great as that recently completed by the vacuum cleaner people where the whole industry scrapped all past designs and went to a canister type vacuum cleaner."

Hotpoint Fall Sales Campaign Sets \$30,000,000 Goal

CHICAGO—A new two-level fall sales incentive selling activity expected to move some \$30,000,000 of appliances, build retail store traffic, increase product identification and use, and find "Mr. Hotpoint of America" has been announced by Hotpoint Co.

In making the announcement, John F. McDaniel, vice president of marketing, said the campaigns at the dealer and distributor level are two of the biggest promotions in the 45-year history of Hotpoint.

From Sept. 1 to Oct. 16, more than 500 Hotpoint distributor salesmen will be fighting for the privilege of gaining recognition as "Mr. Hotpoint of America."

To help the distributor salesmen throughout the contest, Hotpoint has appointed sponsors for the various distributorships. John F. McDaniel, vice president of marketing, is the sponsor for GESCO; Howard Scalf, general sales manager, the sponsor for Graybar; and Clifford C. Gramer, merchandising manager, the sponsor for independent houses.

Mr. Hotpoint of America will be amply rewarded for his efforts and the title bestowed upon him. He will receive a Cadillac Coupe de Ville, a \$250 wardrobe, and an all-expense paid trip for his wife and himself to Hawaii.

The next ten runner-up winners will receive a choice of one of 10 new automobiles for their efforts. They will also be inducted into the Hotpoint Honorary Society of Salesmen, the firm announced.

Top consumer magazines, radio, and television will be used to push the nationwide retail selling activity, the "Hotpoint Golden Harvest of Appliance Values," a three-month campaign beginning in September.

Hotpoint will use the Ozzie and Harriet radio shows on Oct. 16, Oct. 30, and Nov. 13; Ozzie and Harriet TV shows on Oct. 9, Oct. 23, and Nov. 6.

National magazines that will be used to add impetus to the Harvest sales campaign are *Life*, *Saturday Evening Post*, *McCall's*, *Ladies Home Journal*, *Better Homes & Gardens*, *American Home*, *Good Housekeeping*, *Time*, *Farm Journal*, and *Progressive Farmer*. There will be many sup-

plementary ads in other magazines. Three merchandising techniques will be used in the retail campaign. One will be a free giveaway of a four-way measuring spoon as an incentive for consumers to come into the dealer's store to inquire about Hotpoint appliances.

A refrigerator set that can be used for baking, storing, or serving will be offered to consumers. Called the "Harvest Ware" refrigerator set, this five-piece, five-color set consists of a water cooler, two different size casserole dishes, and two different size leftover dishes. A \$9.95 value, dealers will offer it to the consumer at \$3.99 per set.

A dealer will be able to merchandise this "Harvest Ware" set in several different ways. He can use the set as a direct mail piece by mailing a single "Harvest Ware" set out to his list, thereby attracting attention to the entire set. He can make a store display from several sets. He can use it as an outside selling door opener or as an interior refrigerator display.

Another merchandising technique is a four-page, full-color newspaper broadside featuring the dealer's imprint and showing the consumers the Hotpoint full line of appliances that he will be offering during the 90-day campaign. This broadside is versatile in that a dealer can use it as a mailing piece, a store hand-out, or an insert in his local newspaper. Special newspaper mats for dealers will be available through their distributors for consumer advertisements.

To add impetus to these merchandising techniques, the dealers will be supplied with a window banner and four window spots calling consumer attention to their store and the "Golden Harvest" sales of appliances.

HOUSEHOLD REFRIGERATION

New Organization Setup for Avco Uses 4 Divisions with Gen. Mgr. for Each

CINCINNATI—Establishment of a new form of organization as a final step to provide greater strength for the continuing sound expansion of Avco's appliance, radio, and television business was announced recently by J. D. Shouse, vice president of Avco Manufacturing Corp. and general manager of its Appliance and Electronics Div.

The designation of responsibilities within the Appliance and Electronics Div. was occasioned by the recent integration of the Crosley Div. and the Bendix Appliances Div. of Avco, according to Shouse. The new organization consists of four divisions, each headed by a general manager who will have direct authority over his own operations.

In his announcement, Shouse explained that electronics and white goods are essentially different businesses despite the fact that the same distribution organization handles both product groups. He said the new organizational setup would give the respective general managers complete control of their product lines.

The divisions and the general managers who report to Shouse include: Parker H. Ericksen, Avco vice president and general manager, Home Ap-

pliances; L. F. Cramer, Avco vice president and general manager, Radio and Television; C. G. Felix, general manager, Government Products, and L. W. Adkins, general manager, Administration.

"Each of the three first-named general managers will have complete control and responsibility for the sales, engineering, and manufacturing of their respective products and each general manager will be responsible for coordinating and directing all operations of his division, including the plants," said Shouse.

Ericksen has appointed T. H. Mason as general sales manager for Crosley and Bendix kitchen appliances; J. L. Armstrong as general sales manager of Crosley and Bendix home laundry equipment; W. A. McDonough as director of merchandising and advertising, and C. E. Bick, national service manager, home appliances.

Cramer has announced the appointment of H. E. McCullough as general sales manager for Crosley radio and television; R. K. White as manager, advertising and sales promotion, and R. H. Schneberger, national service manager.

PeeKay... the Plastic-Kote "Spray" says:

A little spray goes a long way

PLASTI-KOTE SELF SPRAY FINISHES

Solve your touch-up problems!

Paint and Pressure in one container. Ideal for touch-up and re-finishing.

PLASTI-KOTE, INC.
425 Lakeside N.W. Cleveland 13, Ohio

To make a "GOOD CONNECTION" Call **RIVERSIDE!**

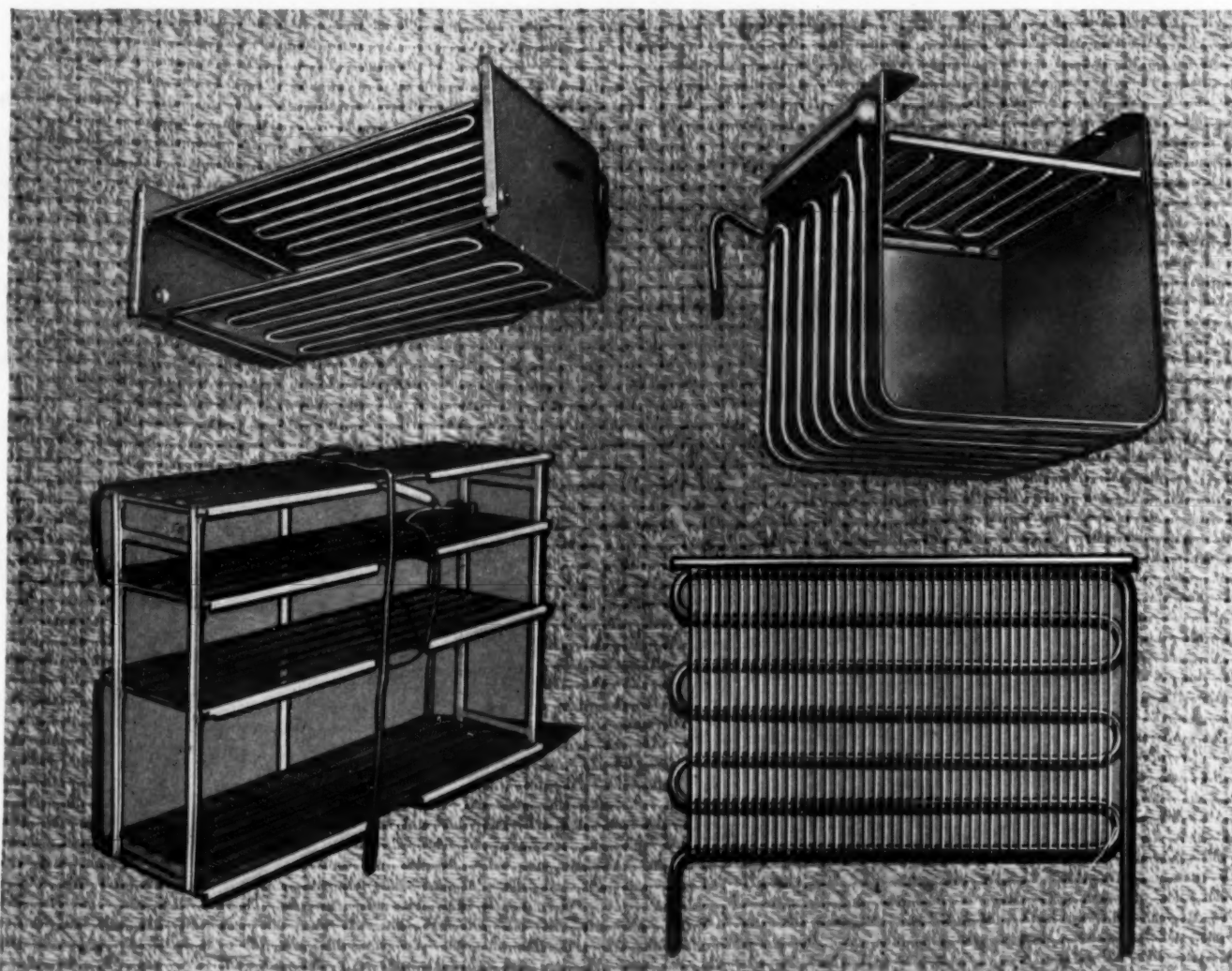
This rubber-encased connector links a refrigerator relay with a Fusite hermetic terminal, which is welded to the compressor. Originally, the connector had a brittle plastic case which presented various problems. Our engineers suggested a molded rubber case, also redesigned the contacts. Resulting improvements: (1) Greater structural strength, (2) Elimination of damage in handling, (3) Faster assembly, (4) Better electrical contact, (5) Higher "pull-out" rating. And if you have problems involving the design or production of similar or more intricate assemblies, you too, can "make a good connection!" Just write or call us, without obligation, for engineering recommendations.

RIVERSIDE MANUFACTURING AND ELECTRICAL SUPPLY COMPANY
10233 Michigan Ave., Dearborn, Mich., Tiffany 6-6800
WIRING HARNESSES AND ASSEMBLIES • CORD SETS • HEATER AND EXTENSION CORDS • SWITCHES • MOLDED RUBBER PRODUCTS

Carrier **DISTRIBUTOR PHOENIX—ARIZONA**

Requires services of experienced refrigeration sales engineer to handle rapidly expanding dealer organization. Must be capable of assisting dealers in design and sales, holding sales meetings on famous Carrier Weathermaker packaged air conditioning. Merchandising ability prime requirement. \$8,000 per year plus commissions.

JOHNSON BROTHERS MFG. CO.
1845 E. MADISON PHOENIX, ARIZONA



Any way, shape or form evaporators can be made better with Bundyweld Tubing

WHY BUNDYWELD IS BETTER TUBING

Bundyweld starts as a single strip of copper-coated steel. Then it's... continuously rolled... and passed through a furnace. Copper coating fuses with steel. Result... Bundyweld, double-walled and brazed through 360° of wall contact.

NOTE the exclusive patented Bundyweld beveled edges, which afford a smoother joint absence of bead and less chance for any leakage.

SIZES UP TO 3/4" O.D.

Bundy Tubing Distributors and Representatives: Cambridge 42, Mass.: Austin-Hastings Co., Inc., 226 Binney St. • Chattanooga 2, Tenn.: Peirson-Deakins Co., 823-824 Chattanooga Bank Bldg. • Chicago 32, Ill.: Lapham-Hickey Co., 3333 W. 47th Place • Elizabeth, New Jersey: A. B. Murray Co., Inc., Post Office Box 476 • Philadelphia 3, Penn.: Tilton & Co., 1717 Sansom St. • San Francisco 10, Calif.: Pacific Metals Co., Ltd., 3100 19th St. • Seattle 4, Wash.: Eagle Metals Co., 4755 First Ave., South • Toronto 5, Ontario, Canada: Alloy Metal Sales, Ltd., 181 Fleet St. East • Bundyweld nickel and Monel tubing is sold by distributors of nickel and nickel alloys in principal cities.

Coupon Club

Post-Card Booklet Makes It Easy for Customers To Turn In Leads To Qualify for Cash or Merchandise Awards If Sale Is Completed

TOLEDO—"This thing is terrific if you use it right. It's the greatest thing in the world."

Jack Golob, owner of Central Appliance Co. here, was talking about his "Coupon Club" scheme under which consumers are rewarded in cash or merchandise for turning in prospects who become customers.

Basic item in the promotion is a 6-in. by 3¼-in. booklet containing five business reply cards. The front cover of the booklet advises:

"Here is your opportunity to earn extra cash. Here's how: Join Central Appliance Coupon Club. Free. Earn cash in your spare time. Fill out the enclosed attached cards (no postage necessary)."

ALL APPLIANCES INCLUDED

On the back of the booklet is the question: "Are any of your relatives, neighbors, or friends expecting to purchase a television set, radio, refrigerator, automatic washer, dryer, mangle, electric iron, air conditioner, home freezer, electric or gas range, oil or gas heater, Mixmaster, toaster, or any type of home appliance?"

Then, the booklet states, "here is how you can do them a favor and at the same time help yourself financially. For any prospect you can furnish us and we make a sale, we will pay you in cash or merchandise of your choosing as follows:

Central Appliance Co.
3125 Cherry St., Toledo 8, Ohio

This Card must be in our possession prior to sale or at time of sale in order for you to qualify for the cash bonus.

Gentlemen:

Kindly get in touch with the following Prospect who is interested in

Name of Prospect

Address

Best time to call A.M. P.M.

Recommended by:

Your Name

Your Address

"COUPON CLUB" members receive a booklet containing five of these business reply cards to inform dealer of friends or neighbors who are in the market for appliances. If the card is in the hands of the dealer before sale is made, the sender gets his award.

"Sales (up to) \$49—we will give you in cash \$1; sales (up to) \$99—we will give you in cash \$2; sales, \$100 or over—we will give you in cash \$5.

"All information sent us will be held in strict confidence unless you advise otherwise."

Also on the back cover is the "boxed" statement: "First in Toledo with the freezer-food plan."

The post cards contain spaces for the user to list the name, address, and telephone number of the prospect,

the appliance in which the prospect is interested, the best time to call, and the user's name and address.

A note in the upper right hand corner of the cards advises: "This card must be in our possession prior to sale or at time of sale in order for you to qualify for the cash bonus."

On the inside back cover of the booklet is a space for the salesman to sign his name below the request: "Call me for additional coupon books for prospects." Central Appliance's



telephone number is also listed here.

A booklet is given to each new customer of the firm. However, it is not just "handed out." Rather, the salesman lets the customer know the store is "doing him a favor" since he can actually pay for the new appliance by using the booklet, Golob pointed out.

He said the salesman tells the customer: "I'm going to show you how you can pay for this item. Here's what I have for you." Then the salesman shows the customer the booklet and explains the Coupon Club setup.

Golob noted that the booklet is valuable in overcoming sales resistance.

PLAN HELPS SALESMEN OVERCOME PRICE RESISTANCE

"For example," he elaborated, "if a husband is balking at buying an appliance, we say to him, 'You'd want your wife to have this appliance if it didn't cost you anything, wouldn't you?' Naturally, he will say 'yes.'"

"Then we ask him, 'You've got relatives and friends, haven't you?' He's just got to say 'yes' to this. So then we show him how he can make the payments on the appliance by digging up prospects for us."

Stressing that it takes hard work and perseverance to make the plan click, Golob declared: "Give me one man who will put eight hours a day of honest effort into working this booklet and I will guarantee him at least \$10,000 a year."

But, Golob lamented, "salesmen today are spoiled. They don't believe this is possible. Of course, it means going up one side of the street and down the other to really pay off."

The Toledo dealer continued: "I know the coupon book is a good selling method. I sold more appliances when I was working the booklet alone than since I hired salesmen. I know my mistake. I thought I could let the other salesmen do the work. Now I see that I've got to do it myself."

Golob indicated that he would like to have a salesman like the one who came into his store recently carrying a pail of water and a mop.

"This guy poured some water on

my floor and then mopped it up," Golob recalled. "I asked him what he was doing and he said he was selling mops."

"I then asked him why he was wasting his time, why he didn't come to work for me. But it turned out that the fellow was a college graduate making \$200 to \$250 a week."

"I asked him how he could make that much money just selling mops. He told me he just walks into every place where there's an open door and starts mopping."

"Here's a salesman who carries a pail of water and a mop around with him all day. I can't get my salesmen to carry a little 1-oz. booklet!"

Golob noted that the Coupon Club is a long-term proposition that can't be rated with respect to any particular period. Sometimes, he said, the store gets 10 cards a day. Other times, none at all comes in.

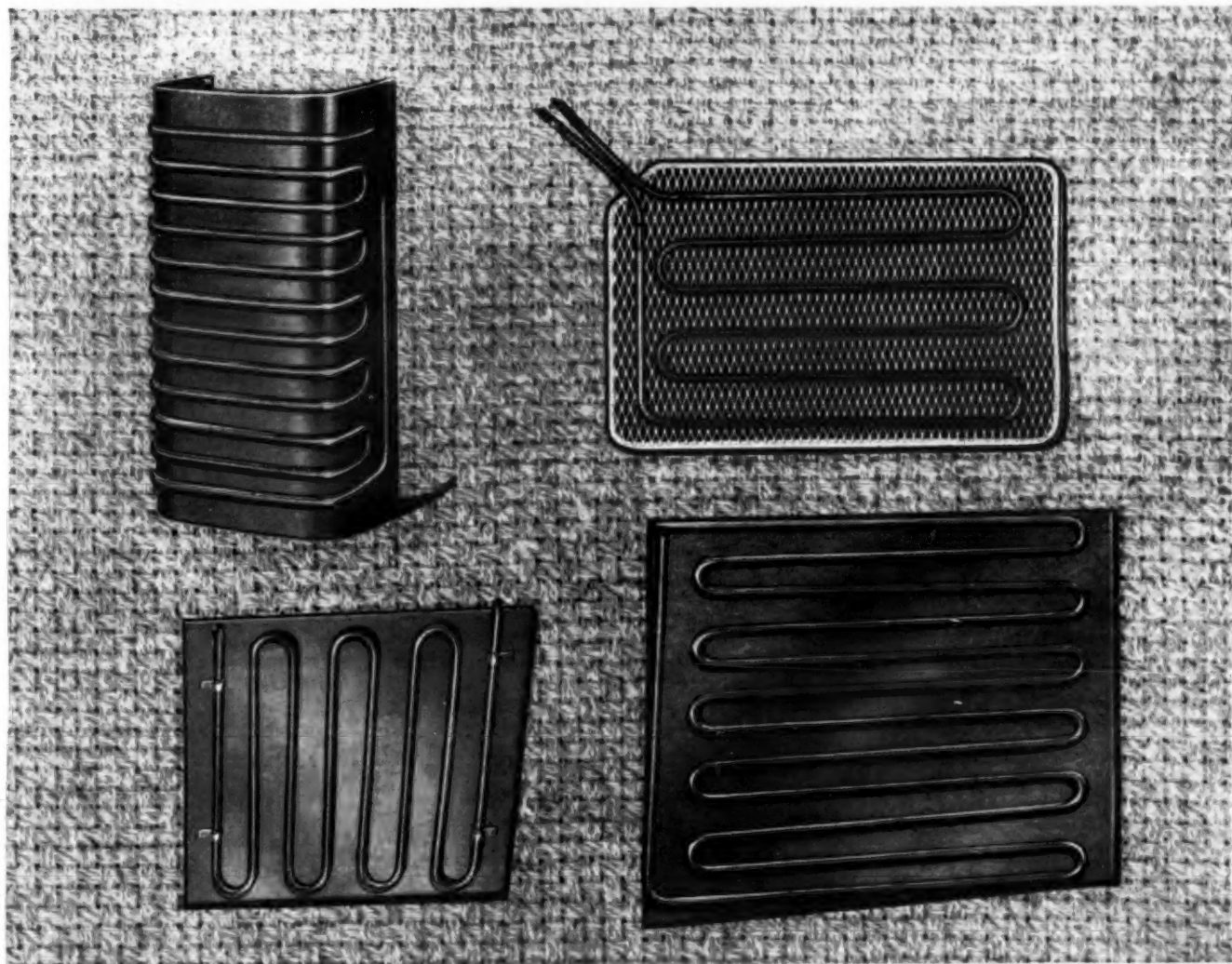
PROSPECT SENT IN AFTER 2 YEARS

He also pointed out that some people keep their booklets for a long time before using them. He cited the case of one woman who didn't make use of her booklet for two years, then sent the store a good prospect.

Originally, Central Appliance offered the Coupon Club deal not only to individuals but to church, civic, social, and charitable organizations. Group demonstrations were conducted in the store, with the organization getting 50 cents for each person attending and 50 cents extra when wives brought their husbands.

During the demonstrations, the Coupon Club plan was explained and efforts made to interest members of the group in the plan. In addition to bonuses of \$1, \$2, and \$5 for sales made to prospects recommended by group members, the organizations were offered \$10 for sales of \$200.

However, Golob said, the group plan has been abandoned because "it didn't work out too well for us." This scheme, he stated, didn't pay off in comparison with the time, effort, and money put into it by the store.



Whatever the way, shape or form you want your evaporator—tubing on steel sheet, or on expanded metal or on wire—it can be made better if it's made with Bundyweld Tubing.

Positively leakproof by test, Bundyweld is thinner-walled yet stronger—has high thermal conductivity, high bursting strength. And Bundyweld takes easily to any of the standard protective coatings.

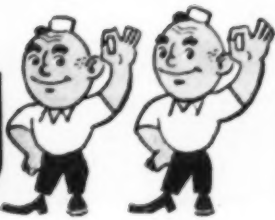
Whatever the way you attach tubing—weld, braze, mechanical clinch—Bundyweld sticks to your supporting member solidly, for keeps.

Bundy's long experience with refrigeration assures you the best—and probably least expensive—fabrication you've ever had. Intricate serpentine bends are produced in volume on fixtures of Bundy's own design. If your part can be made faster, more cheaply, with some slight design modification, our engineers will suggest the change. Over the years their ideas have resulted in considerable savings, actual product improvement for many manufacturers.

Why not see just how much better your evaporator can be made? Call or write BUNDY TUBING COMPANY, Detroit 14, Michigan.

Bundyweld Tubing

DOUBLE-WALLED FROM A SINGLE STRIP



CHECK THESE ADVANTAGES AGAINST ANY OTHER LIQUID LINE FILTER-DRIER

AMAZING PRICE: Check SUPER-FLO'S price, for both original equipment and replacement, against ordinary driers which do not have massive depth filters, molded drying elements, and spun-end copper shells.

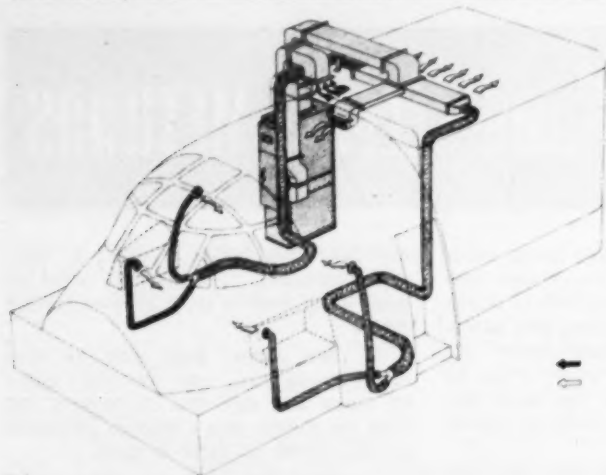
DEPTH FILTERING: A massive fiberglass bag, with unsurpassed depth filtering efficiency, to remove unprecedented quantities of even the most minute foreign particles.

MOLDED DRYING: The famous molded Remcal drying element, field-proven most effective for permanent refrigerant drying, even at liquid-line temperatures. Strong, stable, won't powder.

Plus . . . Spun-end Copper Shells . . . Free Flow . . . Sizes Thru 5-hp.

Available to the trade through wholesalers everywhere.





AIR CONDITIONING unit is an important part of the electronic flight simulator for the C-124A transport built by the Electronics Div. of the Curtiss-Wright Corp. Long training stretches in cockpit of simulator makes air conditioning advisable for crew comfort. Arrows show direction of flow.

Air Force Training Aided by Air Cooled Electronic Flight Simulator by Curtiss

CARLSTADT, N. J.—Flight training in air conditioned comfort is a special feature provided by the C-124A electronic flight simulator which duplicates—on the ground—the complete flight deck of the 200-passenger Douglas Globemaster plane.

Controlled climate is provided by a Worthington 3-ton SCY-351 packaged air conditioner which pipes conditioned air into the cockpit of the huge plane and the instructor's compartment just back of it.

The flight simulator was manufactured for the U. S. Air Force by the Electronics Division of the Curtiss-Wright Corp.

Long training stretches in the simulator cockpit makes air conditioning advisable for crew comfort. In

this "rockin'-chair" atmosphere the training crews are put through all flight conditions so realistically reproduced that they get the perfect sensation of actual flight, the company says.

Sound effects even permit the crew to hear the noises of engines and propellers and the sound of wheels hitting the runway as the "plane" is brought in for a landing, according to the company.

The newest in the increasingly long line of electronic flight simulators, which Curtiss-Wright pioneered, the C-124A Globemaster unit introduces for the first time many new and significant features such as: completely electronic control loadings designed to meet exacting USAF specifications; the most modern and com-

plete radio units to provide all instrumentation required; precise cockpit duplication that activates through electronic means every control, instrument, and switch found in the aircraft itself; new designs for cabinets and inter-connecting cables that provide accessibility to all components of the equipment superior to that available before; and advanced fabricating techniques for the C-124A unit so that maintenance and repair time can be kept to an absolute minimum.

In the instructor's compartment are all radio aids equipment and a trouble console.

The trouble console—one of the principal features of all Curtiss-Wright Dehmel simulators—permits the instructor at will to add emergencies to any flight routine. These can include fires, mechanical failures of many sorts, wing and carburetor icing, propeller and engine troubles, landing gear failures, and the like.

The simulator can thus reproduce in perfect safety to personnel and equipment many emergencies that would be too dangerous to try in actual flight.

Fans at the base of the electrical cabinets of the simulator circulate filtered air which is exhausted through vents. This prevents any dust from accumulating and keeps temperatures at the proper operative level.

Name Filed For Service Firm

BUFFALO — A business name has been filed in the Erie County clerk's office for the Arro Refrigeration Service, 919 E. Delavan Ave. here by Leonard J. Jablon.

Modern Phoenix Hotel Offers Guests 76° Temperatures Despite 120° Outside

PHOENIX, Ariz.—Anyone who has traveled in desert country knows the No. 1 "want" after a trip in 130° temperature is "cool comfort."

The management of the Hotel Desert Hills here knows it—and has capitalized on it. Signs advertising the air conditioned hotel on roads leading into Phoenix make even the most-weary traveler snap to attention. The signs say: "Sleep Under Blankets In The Summer."

The management has installed a 25-ton, gas-fired Servel water chiller in the main guest building of the modern 56-guest-room hotel. Steam operates the water chiller in the summer and a B & G heat exchanger in the winter for heating purposes.

Individual room units receive the chilled water in the summer and hot water in the winter. During the hot months the temperatures in the guest rooms range from 74 to 76°, depend-

ing on the location of the rooms.

Each room or suite has a thermostat which can be regulated by the occupant of the room to select a desired temperature.

The installation is said to be unusual in one respect—the oversizing of the piping. Floyd Collins, engineer of Standard Sheet Metal, Servel distributor, and Servel engineers oversized the pipes to allow for any reserve needed to provide comfortable temperatures on muggy days.

In Phoenix the temperatures may reach as high or higher than 120° outdoors, and an adequate reserve capacity is a major necessity in order to bring indoor temperatures within the "comfort zone," it was noted.

The water chillers utilize the Servel absorption principle. The refrigerant is water, and lithium bromide, an inorganic salt, is the absorbent.

Chatlos Returns to McIntire After Military Service

LIVINGSTON, N. J.—Edward S. Chatlos has resumed his position as development engineer at the McIntire Co., manufacturer of driers, filters, and strainers, after serving two years as second lieutenant at the Wright

Air Development Center, Dayton.

Prior to this military service, he had been engaged for four years in development work at McIntire. He also served three years in the Air Force during World War II.

Here are the Symbols SPORLAN has made Famous!



'G' VALVE
'C' and 'Z'
SELECTIVE CHARGES

No other thermostatic expansion valve designed for commercial refrigeration offers the Peak Performance of Sporlan's Famous G Valve with Selective C and Z Charges.

INTRODUCED by Sporlan to the industry in 1934, this combination has steadily forged ahead in popularity until today refrigeration men, both young and old, have made it their No. 1 choice... They know best what Peak Performance really means!

"C" CHARGE for suction temperatures above zero.

"Z" CHARGE for suction temperatures below zero.

plus "X" CHARGE for extremely low temperatures.

Buy a Sporlan "G" Valve

with Selective Charges from your Wholesaler today!... and be sure to ask him for the Sporlan 52-C Catalog. With it you can select the proper Thermostatic Expansion Valve, Solenoid Valve and Catch-All to give that Sporlan "Right-Down-the-Line" Peak Performance!

SPORLAN VALVE COMPANY
7525 SUSSEX AVE. ST. LOUIS 17, MO.
EXPORT DEPARTMENT
89 BROAD STREET NEW YORK 4, N. Y.

'Foolproof'

Blast-Freezing and Cold Storage Plant Needs Practically No Attention

DENVER—What is believed to be the most completely automatic refrigerating system ever installed in a major blast-freezing and cold storage plant has gone into action here, it was announced recently by Carrier Corp.

The 500,000-cu. ft. plant is operated by K & B Packing Co. of Denver.

"Operation is so thoroughly foolproof and automatic that it can be handled by one man during the regular work week, and left completely unattended over the weekend," Carrier said. "Special controls will start up and shut down compressors one at a time, or even unload cylinders in individual compressors to maintain the temperatures required."

"In case of any malfunction the compressors will automatically shut themselves off and send a warning request for attention to the operator." The storage plant—designed to quick-freeze and store beef, pork, mutton, turkey, various kinds of poultry, and selected fruits—is divided into two large storage rooms.

Capacity of the plant on low temperature storage of fresh and frozen meats for day-to-day handling and distribution through the area is 100,000 lbs. daily. In addition, a blast-freezing section, divided into three compartments operating at temperatures as low as -35° F., will quick-freeze an additional 60,000 lbs. daily on the average.

Refrigeration is supplied by a two-stage ammonia system, with two Carrier 50-ton, low-stage reciprocating compressors and two high-stage compressors totaling 150 tons.

Blast-freezing compartments are equipped with Carrier dry-coil cold diffusers. Low-temperature storage rooms are held at -10 to 20° F. by Carrier cold diffusers with specially designed ductwork and by special overhead coils.

Felix W. Powers, of Powers Refrigeration, Inc., Carrier dealer in Los Angeles, designed the system.

ride the Tenney line!

Half-Round Cooling Unit

just one of our many units that really make money for you with easier, more dependable installations, and customers 100% satisfied!

Interested?

Talk it over with

Tenney ENGINEERING, INC.
26 AVENUE B, NEWARK 5, N. J.
Plants: Newark, N. J., Union, N. J. and Baltimore, Md.

TYPHOON
OFFERS DEALERS MOST Profitable Set-up IN AIR CONDITIONING

Air Conditioning Units—1½-20 tons
Multi-Packaged Systems—Up to 60 tons
Prop-R-Temp Heat Pumps—2-20 tons
Evaporative Condensers
Packaged Water Chillers

TYPHOON AIR CONDITIONING CO. INC.
794 Union Street, Brooklyn 15, N. Y.

DEAN GOLD PLATES

ANY SIZE ANY SHAPE MOST METALS

Write for Technical Data Book

COLD PLATES FOR: Ice Cream Cabinets, Soda Fountains, Farm Milk Coolers, Farm Freeze Cabinets, Window Displays, Food Counters, Sub-Zero Applications for Industrial chilling.

DEAN PRODUCTS, INC. 1042 DEAN STREET, BROOKLYN 16, N. Y.
STerling 9-5400

Low-Pressure Selling Pays

Food Plan Operator Depends Only on Referrals, Canvassing To Keep Freezer Business Moving

By George M. Hanning

SOUTH BEND, Ind. — No high pressure selling and strong reliance on canvassing to turn up new prospects are the twin foundations on which Pre-Pack Distributing Co. here is building a frozen food plan business that its operators expect to be thriving 10 years from now.

Nathan Rosenfeld, manager of the firm, admitted that his company will not sell 1,000 freezers a month, but he declared that he expects to sell more than any other plan in South Bend. As the first one in the business here, he has a good head start. He got into the field in August, 1952 and, he says, has pushed the food plan idea more consistently than any of his competitors.

4-Way Partnership Provides Food, Locker Service

The food plan idea was a natural for Rosenfeld. He is one of four partners who jointly own four businesses. The other partners operate a locker plant and two food stores. The locker plant acts as the food source for Rosenfeld's food plan.

Because the partnership operates other long established businesses, and because the locker plant is so intimately tied in with the food plan, Rosenfeld insists that his salesmen not use high pressure.

"We tell the high pressure boys that we don't want them in our organization," he said. "We want our customers to be entirely satisfied with their purchase and to continue patronizing the food plan."

In nearly a year's operation we have yet to make our first repossession and 78% of our freezer purchasers have continued to reorder food from us after the initial order is used up."

When Rosenfeld hires a salesman, he sees that the salesman gets thorough training before he goes into the field. The new man spends his first three days at the locker plant learning all about the meats and other foods he is going to sell. He learns about the different grades and cuts of meat, how they are processed, and how they are frozen and stored.

Salesmen Get Thorough Training

Then he spends three days with sales manager Max Bowlin, learning about the freezer and how to sell it. To supplement this initial training, Rosenfeld said, the company holds a sales meeting every Monday night when the salesmen's questions are answered, their problems dealt with, and one specific phase of the food plan studied in thorough detail.

"After the man is in the field, we make sure that he uses no high pressure selling. When a family buys a freezer, a man from the locker plant goes out to get the food order. He

goes over all the points of the plan with the family to make sure that they understand just what they are getting.

"The serviceman who installs the freezer lets it run for a day and then returns and checks it over to make sure that it is operating properly. A day after that, the food is delivered.

Letter Follows Sale

"About a week later, we send a letter to the customer reminding her that we provide an unconditional guarantee on the food. If there is anything at all that she doesn't like, we invite her to say so and we remedy it right away. And if she is satisfied, we ask her to write us a letter saying so.

"You'd be surprised how many will sit down and write you a letter. We have received some very fine ones."

Rosenfeld said that referrals by these satisfied customers have become the backbone of the business. "We do no advertising," he said. "All of our business comes from referrals from satisfied customers and from leads dug up by canvassing."

Sales manager Bowlin was hired by Rosenfeld because he had the very background and beliefs that Rosenfeld thinks food plan selling needs.

Since the war Bowlin has held a number of selling jobs and the emphasis has always been on canvassing. Bowlin believes thoroughly in that method of selling.

Learned To Canvass The Hard Way

"I learned how to canvass the hard way," Bowlin declared. "No one taught me. I had to pick it up myself."

Bowlin recalled how he first learned he could sell by canvassing. It was just after World War II when the appliance pipelines were beginning to fill up again.

At the time he was selling gas ranges for the gas company. He had a long list of prospects, "people who were waiting in line for a gas range." However, they showed signs of getting a little fussy. They wouldn't take just any old model to get a range. They wanted a particular one.

As a result, Bowlin found himself with an apartment house size range that no one seemed to want. He told his sales manager that he had gone through his entire list of prospects and nobody wanted the range. What should he do?

The sales manager sympathized with him. "I'm going to make it hard on you," he told Bowlin. "If you don't have that range sold by tomorrow, you're fired." Bowlin knew he meant it.

So Bowlin started pushing door-

bells. Luckily, he recalls, he found a man who was looking for an apartment house range and who bought it.

Emboldened by that success, he tried the canvassing method again and again and found that it worked every time. Out selling water conditioners, he said that he once found seven prospects and made four sales in 45 minutes. At other times, he could make 20 calls and make only one sale.

"But I firmly believe," he declared, "that if a man will consistently canvass, day after day, he will make at least one sale in 20 calls. I can't prove it. I have no statistics to say that it is so. But I firmly believe it."

Bowlin said that Pre-Pack now has five full time salesmen and 10 part time salesmen. Not all of them do canvassing. Some still think that there are other ways of getting business—such as telephone canvasses and direct mail. Bowlin lets them give their ideas a try because, as he says, it is results that count, not what he believes will work.

Try Several Approaches

Bowlin believes that there is no one successful way to canvass. If one approach doesn't work, then try another one, he says. Some neighborhoods are ripe for canvassers and others are poison. All these things the



canvasser soon learns and can direct his activities accordingly.

Most successful approach used at the moment by Bowlin is to take along some giveaways as "door-openers."

Having something to give away has a good psychological effect on both the customer and the salesman, he says. It relaxes the salesman to know that he has something to offer the woman who answers the door and makes the job more like fun. The housewife is surprised to receive something for nothing. And in order to accept the gift she must open the door.

Gifts Intrigue Housewife

Bowlin's men offer her three gifts. First they ask, "Do you play cards?" The woman invariably says yes, and the salesman hands her a score pad. Then he offers her a plastic cap for soft drink bottles. And thirdly he offers her a pencil "to keep score with and to make out your shopping list."

By this time the woman has her hands full and the salesman is holding open the door. The woman is usually a little amused by all this and is curious to find out what the salesman wants.

At this point the salesman explains whom he represents and what he has

to sell. He also has a colorful folder with him, explaining the benefits of the food plan. He gives it to the lady, asking her to read it. If she shows interest, he asks if he may come back at a time when both she and her husband are home to further explain the Pre-Pack plan to them.

One of the biggest stumbling blocks in the way of the salesman today, Bowlin says, is a Consumers' Research Report that puts food freezer plans in a bad light.

"We've had that report thrown up in our faces more often than any other objection. Many times when we go back for the appointment, the husband won't even let us in the house. He says he knows all about it from the consumer's report."

Bowlin says the report contains many inaccuracies and gives a completely wrong impression of food plans. He hopes that someone will write a report favorable, or at least impartial, to them.

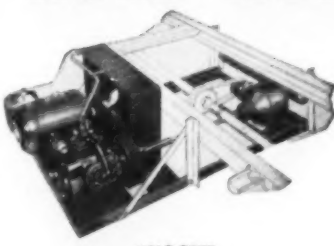
"I will go along with the Better Business Bureau who warn that you can't save any 30% on food by using the plan. But a definite saving can be made with the food plan. We know it can with our plan."

"You've got to use the savings story in order to sell the food plan, even though it is the other benefits that are most important."



Just as it takes the right combination to open a safe, it also takes the right combination of equipment to get the top dividends from truck refrigeration. That's why Kold-Hold gives you your choice of several different truck refrigeration combinations to provide a method of refrigeration that is just right for each special problem. These Kold-Hold systems will maintain predetermined low temperatures in your trucks with any degree of automatic operation desired. They can be fully automatic and thermostatically controlled or they can be semi-automatic requiring overnight hook-up to an electric outlet or a cooling system. One of these systems, properly engineered to your needs, can pay for itself in longer trips, reduced handling, increased customer satisfaction and elimination of spoilage losses.

KOLD-HOLD can answer any refrigeration problem!



KOLD-TRUX

Which do you prefer . . . Mobile or Hold-Over truck refrigeration? Kold-Hold can give you either or a combination of both.

When your weather worries start, pick out the routes with the biggest refrigeration problems and call on Kold-Hold to give you a satisfactory solution. They will give you the right combination for your needs from such highsides as the Kold-Trux Mobile Unit, a mounted compressor, or make-and-break assemblies, coupled to such lowsides as Kold-Hold Hold-Over Plates, Thin Plates, Serpentine Quick-Action Plates, or Blowers.

Why not give us the details of your problems and let our engineers find the most efficient solution for you. Write today for details.



HOLD-OVER PLATES



Tell us your truck refrigeration problems and send now for complete data and literature.

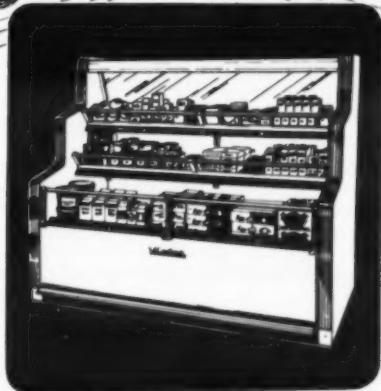
KOLD-HOLD

protects every step of the way

Division of TRANTER MANUFACTURING, Inc., 500 E. Main St., Lansing, Mich.

LOOK 1 YEAR • 5 YEARS 10 YEARS AHEAD

— and you'll buy VICTOR today!



Every type of display case. For Meats, Vegetables, Fish, Delicatessen and Dairy Products. Self-Service and conventional cases. Variety of sizes and endless models for any store layout. Economical and Efficient. Displays that Sell.

... Send for details of this Victor Triple-Deck Merchandiser

and other items in the

Victor line that mean More Sales

... More Profitable Sales for You

Victor

VICTOR PRODUCTS CORPORATION
HAGERSTOWN, MARYLAND

MANUFACTURERS OF THE FAMOUS VICTOR QUICKFREEZERS

Air Conditioning a Lithographic Plant

Humidity Is as Vital as Temperature In Industry Where Pressroom and Plate-Making Areas Require Exacting Year-Round Control



NEW YORK CITY—What are the proper air conditions to be maintained in a lithographic printing plant and what type of air conditioning installation will meet these requirements? And will the system be economically justified?

These are some of the questions raised in a recent article in the *Inland Printer*, a trade magazine of the printing industry, by Charles F. King. And, according to King, there is no general agreement on the answers among either lithographers or the air conditioning industry.

Air Conditioning Will Not Eliminate All Troubles

"It would not be safe to assume that all of the plate-making trouble could be eliminated and all lost press time stopped with the installation of an air conditioning system," King also contends.

"Many lithographers have been disappointed after spending considerable money in making recommended installations to find that the expected results were not forthcoming. In some cases, this was due to an incorrect conception on the part of the engineer, who planned the system, of the requirements of the industry. In other cases, the purchaser was bent on saving money and took the lowest bid—regardless of what conditions the equipment was guaranteed to maintain," King declares.

"There are other instances where lithographers have been disappointed because they expected savings which could not possibly have resulted from merely maintaining uniform conditions in the plant.

Engineers, Salesmen Often Not Aware of Problems

"In previous articles on this subject in these columns, it has been pointed out that both temperature and relative humidity must be controlled in the pressroom and in the plate-making department. It has been further pointed out that engineers and salesmen frequently are not familiar with the loads and load requirements found in platerooms and pressrooms.

"Also, there is considerable erroneous information now widely circulated throughout both the lithographic industry and the air conditioning industry concerning the conditions which should be maintained in the various departments of a shop.

"Only recently one of the leading house organs of one of the lithographic suppliers made the statement that a pressroom should be conditioned at 50% relative humidity, and less than six months ago an air conditioning engineer quoted this figure as one shown in his handbook as the correct humidity for a whole lithographic plant. In fact, the lithographic publication went so far as to

say that if any lower humidity were maintained, static would result.

"Since it has been an established fact for over 15 years that paper should be in condition with a humidity higher than that of the pressroom in which it is to be run, this would mean that stock should be delivered to the presses in condition with a humidity of 55%.

"Paper as received from the mill is seldom up to 50%, and would have to be seasoned to bring it up to the proper moisture content. This would require a separate area with a higher humidity for seasoning than that in which the paper was to be run, or moisture to be introduced into the seasoner, which would throw an additional load on the conditioning equipment.

45% Relative Humidity Found To Be Best for Pressroom

"Thus, it has become a fairly well established fact that a relative humidity of 45% is the most satisfactory when all factors are taken into consideration.

"It might appear, then, that if an owner of a shop wishes to install air conditioning either in his present location or in a new building, all he would have to do is go out and buy a system or piece of equipment which would hold the above condition. If he had had no previous experience, he might think that it would be much

the same as buying a press which would print a 42x58-in. sheet.

"He knows that he has seen prefabricated units of various sizes, and the only problem is to have one of these units of the proper size brought into his plant and set up. In fact, he might even call in several manufacturers of such equipment, or their agents, and have them bid on supplying a unit or units.

"Regardless of how large or how small the shop is, or the area which is to be conditioned, as soon as the sales engineer for the equipment company enters the picture, the purchaser realizes he is in for something different from his previous experience.

"First a survey must be made, and a sketch of the area to be conditioned and the surrounding areas drawn. (If it is a new building still in the planning stages, this data is taken from the engineering drawings.) From there on the sales engineer may follow one or two courses: He may make the survey by himself without any aid from the prospect, or he may ask innumerable questions.

Language of Proposal Will Be Foreign to Lithographer

"In either case, he is going to come up with a formal proposal listing various types of equipment all made by different manufacturers, described in engineering terms such as tons of refrigeration, limits of accuracy, and other expressions completely foreign to the average lithographer.

"It is altogether possible that nowhere in the proposal will there be any mention of relative humidity as such. If questioned concerning this apparent omission, the salesman would undoubtedly point out that he most certainly has not left out anything that is important. He will then point to a section of the proposal which may state in substance that the above equipment has been designed to maintain a wet-bulb temperature of 64° F. and a dry-bulb temperature of 78° F. when the outside conditions are 90° F. (dry bulb) and a relative humidity of 90% or some such figure.

"If only one vendor has been called in, the lithographer may assume that, since the company is thoroughly reliable, and he intends to furnish equipment made by nationally known manufacturers, he is perfectly safe in signing the contract for the installation. However, if a number of representatives are permitted to bid on the job, the lithographer may be in for a very rude jolt," King says.

Prices May Vary from 50-75% From Lowest Bid

He may find that the prices in the proposals from the various bidders vary as much as 50 to 75% from the lowest to the highest bids. He may be further surprised to find that two or more of the vendors were offering to supply equipment made by identically the same manufacturers but at prices which were further apart than the normal markup on equipment would make possible.

"A closer examination of the proposals would indicate that, although the equipment in several proposals may have been made by the same manufacturers, model numbers and other such specifications were different. Therein, of course, is the catch. These different numbers may indicate greater or less capacity, greater or less accuracy in the controls, or an entirely different air distribution system. If questioned concerning these differences, the sales engineers from the various suppliers each would defend his conclusions with figures from identical charts and graphs.

"At this point some lithographers have taken an 'Oh, what's the use' attitude and forgotten all about air conditioning for another year. Others have bought the cheapest one offered and condemned air conditioning as a waste of money. Still others have called in independent consulting engineers and followed their advice to the letter, only to find that they have a system which is more expensive to operate than had been anticipated, or perhaps does not maintain the conditions generally accepted by the industry as correct.

Errors May Be Expensive To Correct

Of course, this has not been the case in every installation which has been made. There have been some very excellent and well-engineered systems installed, but there have, likewise, been far too many incorrectly engineered systems installed in both large and small shops. In some instances, it has cost more than the original cost to correct the errors made, and in spite of guarantees made in the original contract, most of that expense has had to be borne by the purchaser. The peculiar way in which the air conditioning industry operates is largely responsible for the quality of the various jobs," King asserts.

"By far the greatest number of installations fall into the class known to the industry as 'comfort conditioning' jobs. . . .

"Controls in such systems do not have to be very accurate, and variations of as much as ten degrees do not make too much difference. Also, it is not necessary to maintain a constant set of conditions, since it is frequently desirable to let the conditioned area follow the outside conditions to some extent. This lessens the shock when people go outside. . . .

Year-Round Close Control Is Necessary In Plant

"Conditioning for a specific product is still another type, and the one to which conditioning for lithography is most closely related. This generally involves year-around maintenance of certain conditions. Sometimes these conditions must be very closely controlled within very narrow limits of both temperature, humidity, or both. . . .

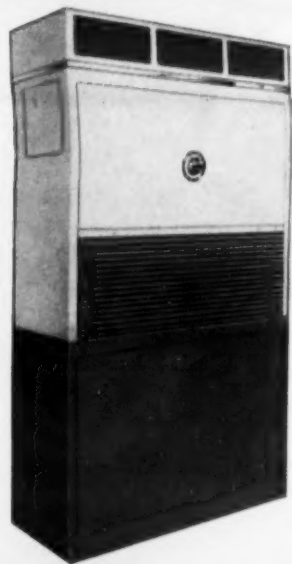
"When extremely low humidities are required, special problems are introduced, but for the most part, even this type of conditioning is not as complicated as that found in conditioning for lithography. One reason for this is that most of the industries which have these special problems also have the technical men available who are able to tell the air conditioning engineers what will be required of the equipment to be installed, in the same technical terms they are in the habit of using," said King.

"Most lithographers have figured that the air conditioning engineer is a technical man, and as such should be able to advise the lithographer. However, many of these engineers have never figured a job for a lithographic plant, and even some who have do not know that they have figured them incorrectly. Since the lithographer did not know what to expect from the installation, any improvement at all met with his satisfaction and no complaint was made; the engineer then could assume he had done a good job. Thus, the advice given may or may not be authoritative.

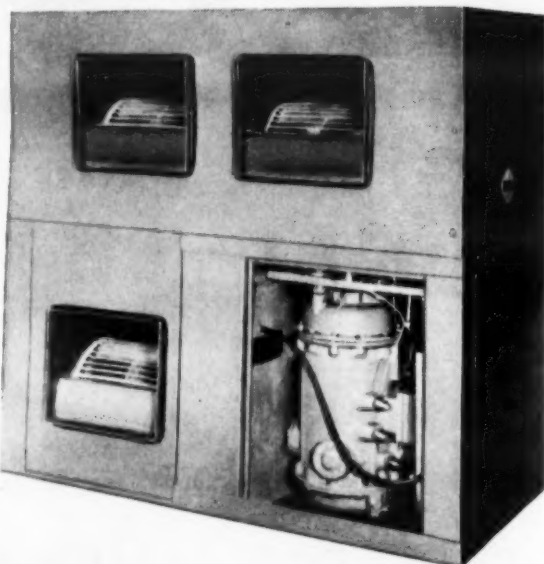
"This in part accounts for the wide range of prices quoted when a

(Concluded on next page)

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Air Conditioning a Lithographic Plant

(Concluded from preceding page)

number of bids are received on a particular job.

"To show further the complex nature of air conditioning for lithography and the reason why prices may vary so greatly from bid to bid, the equipment which must be assembled to make up a complete system should be discussed. This consists of a cooling unit, a means of removing moisture from the air, a heating unit, a means of putting moisture into the air when needed, and ductwork to distribute the air, and control devices

to operate each of these pieces of equipment when necessary.

'Packaged' Units Gain Popularity

"During the past few years, 'packaged units' have become popular and to some extent replaced central station installations. These units are prefabricated in various sizes and may be placed in or close to the area to be conditioned. Thus, instead of having one large unit to take care of the requirements of the whole shop, a number of small units may be used more economically. The savings come from the cost of installation as well as efficiency of operation.

"In many installations, the cooling unit plays a two-fold role. In cooling the air, it also removes moisture. Moisture condenses on the cooling coils in the same manner as it does on the surface of a glass containing an iced drink. This condensation drips off the coils and is carried away by a drain.

"There are other means of removing moisture, such as passing the air over beds of silica gel or through solutions which will take up the moisture, and these work very efficiently. However, the original cost of such installations is usually quite high and considerable heat is required to continually dry or reactivate the moisture-removing material.

"When an extremely low relative humidity is required, this latter method must be used, but for the conditions demanded by the lithographic industry, the cooling coils can be used. However, the conditions are almost too severe for the weather which prevails in certain parts of the country. On extremely hot days when the humidity approaches 100%, it may be necessary to cool the coils to a point where ice will form on them and it will be impossible to control the humidity.

Another difficulty which is also frequently encountered when the cooling unit is also used for dehumidification arises from the fact that it is frequently necessary to remove moisture when no cooling is needed. This means that the compressor must run to take out the moisture and at the same time the heat must be turned on to rewarm the dried air.

"One of the most important parts of the system is the control setup. Since the units are designed primarily for comfort cooling, all that is required to make them function properly for this purpose is a thermostat which turns the unit on when the temperature gets too high and turns it off when it becomes too low.

Complex Controls Required

"However, in air conditioning for lithography a much more complex system of controls is required. They must turn on the heat when the temperature is too low, turn on the humidifier when the humidity is too low, turn on a unit when the humidity is too high, or temperature too high, or do any combination of these operations which conditions demand.

"The accuracy with which these controls are able to maintain the standard conditions in the room depends on the design of the system, the layout of the duct work, the location of the controls, and the design of the controls themselves.

"It is a strange state of affairs, but apparently no one has been able to state definitely how accurately temperature and the relative humidity should be controlled in the various parts of a lithographic shop. Although it may be said that the correct relative humidity should be 45% at a temperature of 75° F., does this mean that it is good enough if it is held between 40 and 50% at from 70 to 80° F.?

"If this is true, as much as 10% of the cost of the total job may be saved on controls alone over one which attempts to regulate the variations within 2° F. variation in temperature and 2% relative humidity.

"Air conditioning for lithography has a great number of problems peculiar to it. Such a hodge-podge of equipment assembled by someone who has no understanding of the industry or its problems could hardly be expected to function efficiently. Furthermore, since little or no technical help can be expected from the average lithographer, it is easy to understand why so many lithographers have been stung.

"However, a very efficient type of conditioning could be designed especially for the industry if some manufacturer would take the trouble."

INSIDE DOPE

by GEORGE F. TAUBENECK

(Concluded from Page 1, Column 1)

Didn't Mean To, Boss

Strategy calls for a pitcher to waste a ball when he has the advantage of an 0-2 or 1-2 count on the batter. But the temptation to whip over a "high hard one" for a fast third strike often is hard to resist. Result: he grooves a fat one which an alert batter sometimes whangs into the upper deck.

Alarmed by this tendency, "Rajah" Hornsby (when he managed the St. Louis Browns) automatically fined his hurlers fifty bucks everytime they succumbed to the aforesaid temptation.

Hornsby likes to tell about the Browns pitcher who was "ahead" of a batter, 0-2, and unintentionally slipped across a fast ball which became a called third strike.

"Yer out," bellowed the ump. Fans were startled to hear the apprehensive pitcher scream: "Oh, no! I missed the plate by a foot!"

Truth Is Stranger

According to "Lefty" O'Doul, fabulous former Dodger and present manager of the San Francisco Seals, the two "Babes" (Ruth and Herman) played against each other in an exhibition match down South.

Outer boundary of the alleged dia-

mond was a cornfield. Ruth had careened two homers into that patch of maize; and when he came to bat in the last of the ninth with the score tied, right fielder Herman slunk back unnoticed into the tall corn—prepared to rob Ruth of a third round-tripper.

"Babe" No. 1 drove the third pitch on a line into the corn patch, and the game was over.

Two hours later "Babe" No. 2 wobbled back to the hotel where the Dodgers were staying. O'Doul, his roommate, was mildly interested in what Herman had been doing in the interim.

"Has she got a friend?"

Exploded Herman:

"I been out like a light in that there corn. I caught the Big Guy's line drive right on my kisser!"

Add Ruth Stories

It wasn't unusual for The Great Ruth to arrive late for a game. Miller Huggins, his manager, seldom knew where to find him, either. The "Babe" had many friends and haunts, and prodigious "staying" powers.

The Great Slugger seldom bothered to check in at a hotel because he had no intention of going to bed.

"The night was made for fun," was his motto.

However, when he missed the opener of a four-game set to in Boston's Fenway Park, and couldn't be located on the morn of the second day, Huggins called the police and sounded the tocsins.

Bill Corum, at that moment, was covering the Yanks' road trips for a New York newspaper. Like Ruth, Corum had loads of friends who en-

joyed keeping him up and out all night. Arriving at the Bosox stadium in the middle of the afternoon, Bill was dismayed to hear a newsboy hoarsely:

"Wuxtry, wuxtry. Babe Ruth Missing."

Corum bought a paper. He'd been scooped, he figured, and was just about to swear off for life when there came a mighty crowd-roar. Looking upward, he saw a baseball sail high over the centerfield wall.

"Like hell he's missing," grunted Corum, vastly relieved.

Maybe You Won't Believe It—

Although Ruth threw money away as if it were confetti, he sold his services at top-o'-the-market prices, and insisted on getting what he thought was coming to him.

At the height of his acclaim he was nettled to discover that a five-cent candy bar labeled "Baby Ruth" was on sale everywhere—and that he was receiving no royalties therefrom.

He sued the manufacturer, and lost. Defendant claimed that the confection had been named after a baby daughter. For a long time Ruth was sore about this, until. . .

Driving a top-down automobile near Dallas on a spring evening "Babe" halted for a stoplight. From the curb a Negro lady rushed out and accosted him—with a little girl in her arms.

"Mistah Ruth, suh," blubbered the lady, "God bless you. We-all admiahs you so much my li'l girl won't eat no candy 'cept Baby Ruth babs."

Delighted no end, Ruth called off the feud.



In response to hundreds of requests from AIR CONDITIONING & REFRIGERATION NEWS subscribers, the conductor of its "Inside Dope" column has collected and grouped his best "Stories of the Week." They are now available in convenient book-form for your reading and working pleasure. The book is entitled: "You'll Love This One."

Everyone will enjoy reading this book, we hope, but for the salesman—and for anyone who may be called upon to "say a few words" at a meeting—it should have special appeal.

Here's why: this book of good stories you can tell is printed on thin paper, bound in flexible leatherette, and designed to fit neatly into your inside coat pocket.

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Gigantic St. Louis Produce Market Accommodates 28 Wholesalers Who Require Refrigeration

ST. LOUIS—When the St. Louis Produce Market, Inc., opened its gigantic produce market to replace its ancient, dilapidated and traffic-snarled setup, 25 of the 28 wholesalers requiring refrigeration selected new and modern Kramer equipment, Kramer Trenton Co. announced recently.

A total of 73 large Kramer Trenton units were used throughout the new market.

Most of the new installations were set up by the R & R Equipment Co. and the Thermal Engineering Co., both of St. Louis. Both refrigeration contractors used Kramer cooling coils and Kramer "Thermobank" automatic hot gas defrosting units exclusively in the new installations.

The R & R Equipment Co. utilized 44 large Kramer Trenton cooling coils when it installed refrigeration rooms for 18 wholesalers. One of these concerns also makes use of the Kramer Trenton Thermobank system in its giant frozen food storage room. Purchase of the Kramer Trenton equipment used by R & R was negotiated through the N. O. Nelson Co. of St. Louis.

The Thermal Engineering Co. set up all of the market's new banana room installations, all of which are equipped with Kramer Trenton "Coolmaster" coils in use with 5-hp. compressors. In all, 29 Coolmasters were installed in banana rooms operated by equipment negotiated through the

Authorized Refrigeration Parts Co. of St. Louis.

One wholesaler, the Raith Produce Co., makes use of a 60 by 13-ft. Armstrong -10° freezer room installed by R & R, to distribute frozen fruits and vegetables.

This room, which totals 8,100 cu. ft. of storage space, utilizes two Thermobank "Freon" systems with two 7½-hp. compressors. Four large cooling coils are mounted on the ceiling.

The system is capable of maintaining constant sub-zero temperatures without interruption for manual defrosting. Frozen foods are transported in and out of the room on a Speed-way conveyor system.

Costing in excess of \$35,000, the huge Raith installation is equipped with a complete 200-amp., 3-phase electrical power installation, including a special panel board and wiring service.

A typical banana room installation was setup by the Thermal Co. for the M. Rizzo & Co. This wholesaler's four rooms, which have been built to accommodate a carload of bananas each, measure 15 ft. wide, 25 ft. long, and 8 ft. 6 in. high. Each room is cooled by a Kramer CM 360 Coolmaster. Two 5-hp. compressors are used for four rooms, and a single evaporative condenser cools the system for all four rooms.

All the banana rooms, installed by the Thermal Co., are designed to re-

produce perfect ripening and storage conditions. Through the use of sprinklers, 100% humidity can be maintained constantly. Heating and cooling units are used alternately to accelerate or delay the ripening period.

The temperature of each banana room is controlled by a thermostat operating a solenoid valve in the liquid line to the cooling units. The compressors are controlled by high and low pressure control.

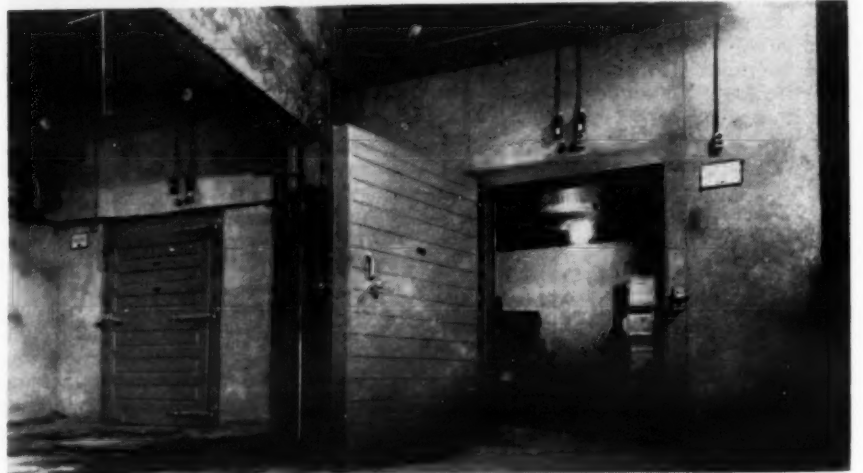
Each set of two compressors is interconnected with each evaporative condenser and the compressors are step controlled. The evaporative condensers on the banana rooms are mounted indoors with modulating air dampers.

Fischman Picks Buford As Florida Distributor

PHILADELPHIA—Appointment of Preston Buford, Tampa, Fla., as exclusive franchise distributor for Florida for its "Style-Master" and "Challenger" soda fountains and luncheonette equipment has been announced by Fischman Co. here.

Buford is widely known in his state, having been affiliated for a period approaching 40 years with Liquid Carbonic Corp. He will make his headquarters at 4508 Dale Ave., Tampa, and will offer complete sales, installation, and service.

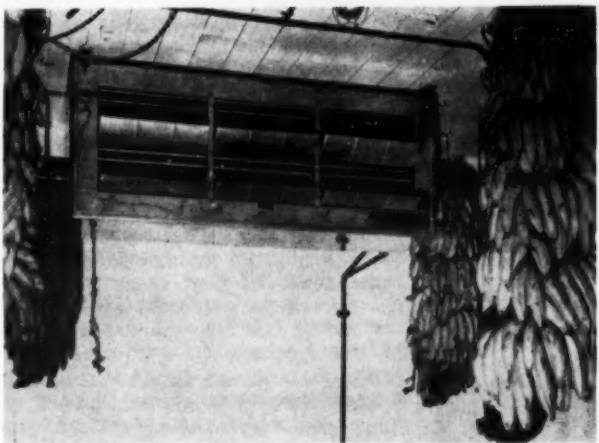
Commercial Refrigeration



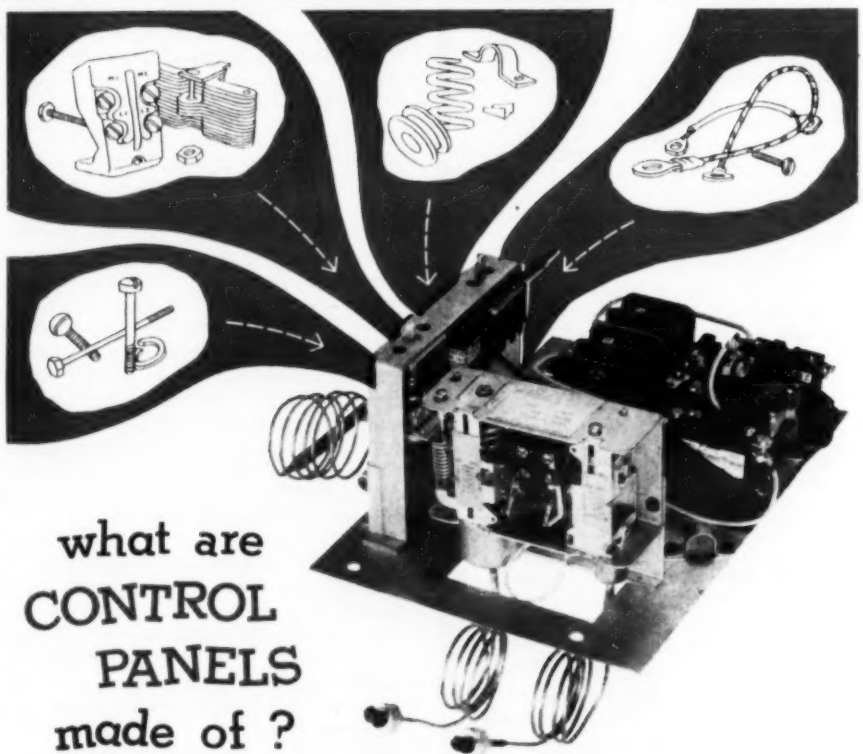
VIEW of Raith Produce Co. refrigerator showing Kramer Trenton R210 Radial Cooler.



RAITH PRODUCE CO. frozen food room showing Thermobank installation.



BANANA ROOM of M. Rizzo & Co. showing Kramer Trenton CM 360 Coolmaster.



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5 Top Items In Residential Cooling

Proper Treatment of Roof, Windows, Moisture, Walls, and Inside Heat Demands Attention In Air Conditioned Home, Says 'House & Home'

NEW YORK CITY—Proper treatment of roof, windows, moisture, walls, and heat created inside are the "five top priorities for designing an air conditioned house."

Under that title some detailed suggestions for "the right design" that "will cut the air conditioning load of a 1,000-sq. ft. house down to 1 ton" appear in the August issue of *House & Home* in an article written by A. M. Watkins, staff engineer of the publication, in consultation with Charles S. Leopold, past president of the American Society of Refrigerating Engineers and the air conditioning designer for such projects as the Pentagon Bldg.

CUTTING PEAK HEAT LOAD LOWERS COSTS

Importance of proper design was stressed in the opening of the article: "Every time you cut the peak heat load on the compressor by 1,000 B.t.u. an hour you cut the installed cost for cooling roughly \$50, the operating cost \$3 to \$5 a summer (depending on local water and power costs)."

Commenting generally on design changes, the article makes these points:

"Should an air conditioned house be sealed tight? Plain silly. . . ."

"Do east windows add much less to the cooling load than west? A fallacy."

"Should you plan your houses square for easier cooling? Hokum. . . ."

"On the other hand:

"A slab house is much easier to cool than a crawl-space house."

"White paint is one of the cheapest ways of all to cut cooling costs."

"A flat top is harder to cool than an attic house—a cathedral ceiling one of the hardest of all."

"Old-fashioned shutters are hard to beat for shielding east or west windows."

"A house in a treeless tract must handle about twice as big a heat load as the same house in the woods."

"A house in Milwaukee needs a much wider south overhang than one in Dallas."

These important points are also brought out:

"Every good idea for making it easier to cool a house with air conditioning will also make it easier to keep the house cool without air conditioning. . . ."

"Home cooling should be designed for an indoor temperature of 75° (and 50% relative humidity). . . ."

The article approached a detailed analysis of the problem by discussing the heat loads on a "typical" 1,000-sq. ft. ranch house 25 ft. by 40 ft. with an 8-ft. ceiling and 250 sq. ft. of windows in its 1,040 sq. ft. wall. The house is oriented with its long axis east to west and 50 sq. ft. of glass on the west. The house is not insulated.

This house, the article stated, "might need a 7-ton (84,000 B.t.u.) cooling unit at a cost of up to \$4,000. With the right house. . . you could safely specify a 1-ton system at a cost of about \$600."

Top priority in cutting the potential heat load is given to the roof, which, with this house (1,000 sq. ft.), could be subjected to more than 250,000 B.t.u./hr.

Although the "wrong kind of roof" (dark, poor ventilation, no insulation) will transmit only 10% (25,000 B.t.u./hr.) into the house, the "right roof" could cut this figure to a mere 600 B.t.u./hr., the article indicates.

'RIGHT ROOF' DESCRIBED

The "right roof" would have a smooth white-painted surface, ventilated attic, and 6 in. of bulk insulation or the equivalent.

Regarding the second priority—windows—the article suggests, "There is absolutely no good reason not to put all the windows you want in an air conditioned house and put them where you want them."

The trick is to keep the sun off

the glass and insulate it with double glazing. (Latter suggestion, the article states, doesn't pay off for cooling alone because it's too expensive, but is profitable where cold winters are also experienced).

To keep sun off the glass a wide roof overhang "may well be the best" on south exposures, "but on the east and west it is just about the least efficient."

For east and west windows, old-fashioned shutters painted white, white Venetian blinds outside the house, awnings, and trees and planting are recommended.

MOISTURE ACCOUNTS FOR 25% OF TOTAL HEAT LOAD

The problem of moisture, which accounts for 25% of the total heat load, is "one of the hardest parts of the heat load to reduce by design."

Moisture generated indoors by cooking, bathing, drying clothes, should be vented "just as fast as you can."

"In the kitchen an exhaust fan is mandatory; in the bath highly desirable. . . . Don't hang anything to dry inside the house, and be sure the clothes dryer is well vented."

Moisture from outside air and the ground presents greater problems. "In the Gulf Coast states. . . an outside vapor barrier is imperative." In a two-season climate, a single



Coleman Co. Appoints Distributors In Ill., Kentucky, Texas, and Mo.

WICHITA, Kans.—Appointment of four new distributors for Coleman residential air conditioning equipment was announced recently by the Coleman Co., Inc. here.

Columbian Electrical Co. of Kansas City, Mo. has been named to serve Coleman dealers in western Missouri and eastern Kansas. C. O. Anderson is sales manager of the Coleman division.

Edwin Flato Co. of Houston, Texas will serve Houston and southeast Texas. B. Melton Wright is Coleman department manager.

Crum Distributing Co. of Decatur, Ill., replaced Johnston-Moody Co. when the latter went out of business. James S. McQuinn is Coleman department manager covering central Illinois.

Valley Distributing Co. of Louisville, Ky., covers all of Kentucky except for a few counties in the extreme southwest and southeast corners. E. F. Kirn is co-owner and Coleman department manager.

H. F. Haldeman Appointed Servel A. C. Distributor

EVANSVILLE, Ind. — Harry F. Haldeman, Inc. of Los Angeles has been appointed as a Servel air conditioning distributor in the Southern California area.

Haldeman's trading area covers the following counties: Imperial, San Bernardino, Los Angeles (southern half), Orange, San Diego, Riverside, and Ventura.

Quiet, Efficient
AIR CONDITIONING
Control at Austin's
STEPHEN F. AUSTIN
Hotel is Provided
by . . .



SOLENOID VALVES

Whether your visit to Texas' capital be business or pleasure, make Hotel Stephen F. Austin your headquarters. The central location, exceptional food, modern air conditioned guest rooms with radio and television, make the "Stephen F." a favorite with sports fans, businessmen, and tourists alike.

To make sure of reliable temperature control at the "Stephen F." the contracting engineers for the air

conditioning system, Decker and Roberts, of Fort Worth, Texas, chose JE Solenoid Valves.

It has been proven many times that the efficient performance provided by JE Solenoid Valves in each unit would mean quiet, dependable temperature control in each room.

Unconditionally guaranteed for 18 months.

ALL JE Solenoid Valves have these Five Major Features of Dependability:

- Tight Seating—no bubble tolerance
- Simplicity—only two moving parts
- Long Life—cool coils
- Durability—all corrosion-resistant material
- Opening Pressure Differential—higher than most others on the market

See Your Local Refrigeration Wholesaler, or Write Us Today for Details.

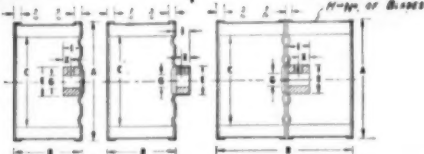
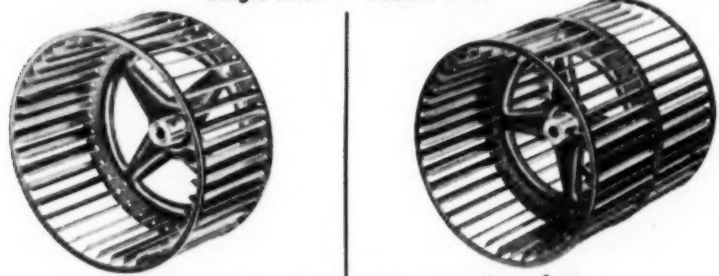


single and double inlet

WELD WHEELS

LAU all-Welded Construction with individual blades of correct length, width and pitch with embossed back or center plate for maximum strength. Greater air delivery . . . better pressure characteristics . . . truer balance and long, trouble-free service for greater than usual blower wheels.

Single inlet • Double inlet



Wheel No.	A Dia.	B—Width			C	E	G—Bore			I	X	U
		Min.	Max.	Std.			Min.	Max.	Std.			
WW 4 1/4	4 1/8	1 3/4	3 1/2	2 3/8	3 1/8	1	1/4	1/2	1/4	1 1/8	1/4	22
WW 4 1/2	4 1/2	1 3/4	3 1/2	2 3/8	3 1/8	1	1/4	1/2	1/4	1 1/8	1/4	24
WW 5	5 1/8	1 3/4	4	2 1/2	3 1/8	1 1/4	1/4	3/4	1/2	1 1/8	1 1/2	26
WW 6	6 1/4	1 3/4	4	3	5	1 1/4	1/4	3/4	1/2	1 1/8	1 1/2	32
WW 7	7 1/2	1 3/4	4 1/2	3 1/2	6 3/8	1 1/4	1/4	3/4	1/2	1 1/8	1 1/2	38
WW 8	8 1/8	1 3/4	4 1/2	4	6 1/8	1 1/4	3/8	3/4	1/2	1	3/8	40
WW 9	9 1/8	1 3/4	4 1/2	4 1/2	7 1/8	1 1/4	3/8	3/4	1/2	1	3/8	40
DWW 4 1/4	4 1/8	3 1/2	7	4 1/4	3 1/8	1	1/4	1/2	3/8	1 1/8	1/4	22
DWW 4 1/2	4 1/2	3 1/2	7	4 1/4	3 1/8	1	1/4	1/2	3/8	1 1/8	1/4	24
DWW 5	5 1/8	3 1/2	8	5	3 1/8	1 1/4	1/4	3/4	1/2	1	3/8	26
DWW 6	6 1/4	3 1/2	8	6	5	1 1/4	1/4	3/4	1/2	1	3/8	32
DWW 7	7 1/2	3 1/2	9	7	6 3/8	1 1/4	1/4	3/4	1/2	1	3/8	38
DWW 8	8 1/8	3 1/2	9	8	6 1/8	1 1/4	3/8	3/4	1/2	1	3/8	40
DWW 9	9 1/8	3 1/2	9	9	7 1/8	1 1/4	3/8	3/4	1/2	1	3/8	40
Guardian Hub						1.114	3/8	3/8	1/2	1	3/8	
Lovejoy Hub						1 1/4	3/8	1/2	1/2	1 1/8	1 1/2	

Write for Catalog Page 707-11

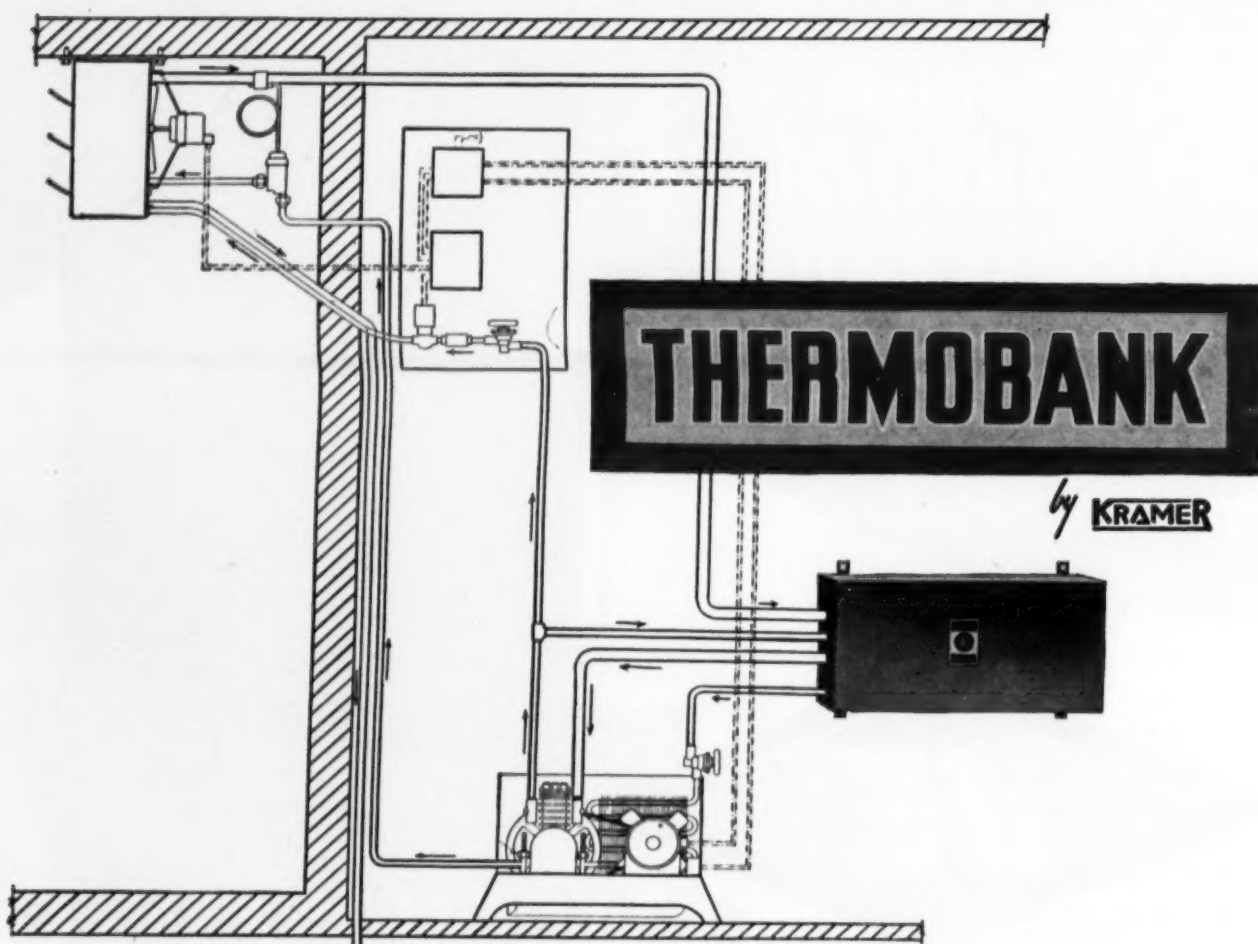
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Look at the record before you buy any defrost system

For eight years THERMOBANK has been the unquestioned standard for low temperature automatic defrosting. Significant improvements over the years have made THERMOBANK even better.

If you look at the record of thousands of successful installations, you, too, will join the leading refrigeration experts specifying Kramer THERMOBANK.

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"I have always felt that whatever the Divine Providence permitted to occur I was not too proud to report. The people are not served by pussyfooting, or by that sort of journalism in which nobody will ask who is the editor of a paper or the writer of an article, and nobody will care."—Charles A. Dana.

Who Is Qualified To Install Home Air Conditioning?

IT'S HARDLY reached the stage of a knock-down, drag-out competitive battle, yet. But experienced Joes in our business are laying down bets as to:

WHO WILL SELL AND INSTALL YEAR-ROUND RESIDENTIAL AIR CONDITIONING?

Refrigeration firms which have been active in commercial and industrial air conditioning for many years are sure that they are the best qualified to cool homes.

Strangely, these same contractors—who think they should get all the business—privately believe that a good chunk of it probably will go to somebody else.

Conceivably that may happen. But if it does, it is the consensus of opinion that a great many heating contractors will have a helluva time trying to train their men to install and service the refrigeration cycle of the all-year system.

As a matter of fact, they will run into trouble recruiting the competent servicemen and installers they'll need.

Some heating contractors—and furnace manufacturers—ALREADY HAVE FOUND THIS OUT.

What is more likely to happen, in our humble belief, is that a new type of Air Conditioning Dealer may evolve.

He may have been, originally, a refrigeration dealer—or a heating contractor. In either case he will have to add a new dimension to his present business.

The history of the building trades themselves would indicate this as a logical outcome. Consider these developments:

Carpenters, bricklayers, stone masons, glazers, and painters were the only trades involved in building a home not so long ago. These trades still are indispensable in residential construction. But would a modern house be complete if any of these groups of workmen packed their tools and moved on to another job?

What about plumbing? (Now, there is a handicap to low-cost air conditioning installation. Plumbers are notoriously poor salesmen, slow motion experts, and overchargers—according to many people in our industry who have dealt with them).

When Edison brought electricity into the homes, did the carpenter, or bricklayer, painter, or plumber take over this new art? Although in some cases your wiring may have that appearance, we believe you can assume (and, we hope, safely) that it was installed by an electrician.

Numerous other relatively new specialists in the home construction field can be cited.

Thus, it becomes rather difficult for us to imagine a sheet metal solderer, for example, simply picking up a gauge manifold, set of valve wrenches, and a halide torch some morning and making a SUCCESSFUL air conditioning installation in a home that afternoon, or next year, for that matter.

We happen to know that it's been tried—and the lawsuit which followed the debacle still isn't settled.

The more engineering in the product, and the less required of restricted union-labor installers, the faster the air conditioning industry will achieve its potential.

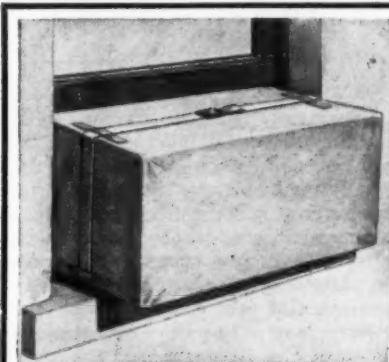
Furthermore, on the local installing level, air conditioning specialists will be required if the job is to be done right. It would appear as if we'll have to train our own.

ROOM COOLER NEWS



Designed for the Future

STREAMLINED COOLING gets approval of this trio shown with the prize winning entry in a room cooler design contest for students at the Chicago Art Institute. Pictured are, left to right, Hubert Roop, dean of the School of the Art Institute; Thomas Mills, first prize winner, and A. Mitchell, president of the Mitchell Mfg. Co., Chicago, sponsor of the contest.



The Best Air Conditioner Cover on the market...

- Made for Rugged Weather — Storm-proofed.
- Tailored to fit — Strong finished seams.
- Adjusts to fit any air conditioner.
- Quickly installed.
- Prevents cold draft through air conditioner.

Here is the Air Conditioner Protector that SELLS because it is styled better and made better to protect the large investment in expensive units. Write for complete information.

TULSA CANVAS PRODUCTS CO., INC.
1217 EAST 4TH ST.
TULSA, OKLAHOMA

60-Day Free Trial Offer Sparks Room Unit Sales in South American City

AUBURN, N. Y. — Offering room units for trial installation is an effective way to introduce air conditioning in areas where its benefits are relatively unknown, according to Carlos Mercado, Remington Corp. export manager.

He announced the successful use of such a program by Talectro Ltda., Remington's distributor in Barranquilla, Columbia, S. A.

"As is the case in many regions where air conditioning is not as widely used as in the United States, consumers in Barranquilla had to be sold on its many benefits," Mercado indicated.

"By offering room units free on trial to a selected list, Talectro was able to demonstrate air conditioning's contributions of coolness, health, and comfort to those people whose judgement was most respected in the community."

Talectro approached doctors, lawyers, business executives, government officials, and other prominent professional people, Mercado explained, and offered to install a Remington window unit in their homes or offices for 60 days without charge or obligation. At the end of that time, they had the choice of buying or returning their unit.

All 15 units installed as a result of the offer were purchased at the expiration of the trial period, and one customer immediately ordered seven more.

Tests Show Aluminum Absorbs, Transmits Less Radiant Energy Than Steel Slats or Cloth Shades

ATLANTA—A series of tests to determine the efficiency of a steel or aluminum venetian blind and a shade cloth to reduce indoor temperatures by stopping solar radiation were conducted recently for the Hunter Douglas Corp. here.

Francis S. Dammers, district manager for Hunter Douglas, reported that tests results show that aluminum is the most efficient reflector of heat, acting somewhat like a mirror, absorbing and transmitting less radiant energy than steel slats or window shade cloth.

This, he notes, offers savings on space cooling load in air conditioned buildings.

Dammers said the tests were conducted by Electrical Testing Laboratories in New York City. The tests were intended to determine the relative merits of the materials themselves, apart from other factors that influence the effect of solar radiation on indoor temperature (such as insulation, air circulation, humidity, building materials used, or light or dark colors).

"We assume the most efficient of these (aluminum, steel, or shade cloth) will naturally serve the most practical purpose in architecture to keep air and surface temperature at a minimum, assure more comfort, and reduce load on air conditioning systems," Dammers said.

"Solar radiation," he explained, "entering through the window glass, strikes inside objects and surfaces,

Materials	Surface Temp. ° F.	Air Temp. ° F.	Radiation Gain Above Lowest Reading
Aluminum—Paint White	83.5	79.0	0%
Steel—Paint White	86.5	82.0	3.8%
Aluminum—Unpainted	92.5	91.5	15.8%
Steel—Unpainted	111.5	94.3	19.3%
Window Shade Cloth	99.0	101.0	27.8%

being absorbed by them and in turn being radiated back.

"Therefore, the aim is to look for a material which tends to stop rays at the window by reflecting them to the outside, rather than absorbing them and to turn into a radiator itself.

"With this in mind, two temperature readings were made on different materials:

"1. The surface of the material to determine its heat absorption and radiation.

"2. Air temperature immediately back of the material to show how much solar radiation was trapped from entering the room.

"All readings were made on a sunny day and registered simultaneously to avoid any shifting conditions. The first experiment was made with aluminum and steel, both painted white; then the test was repeated with unpainted materials to determine the reflecting and absorbing properties of the materials proper.

"It is difficult to state the precise effect blinds will have in reducing indoor temperature brought about by solar radiation. This will depend on

many factors besides the venetian blind itself.

"However, the test result shows aluminum as the most efficient reflector of heat, acting somewhat like a mirror, absorbing and transmitting less radiant energy than steel slats, or window shade cloth, with consequent savings on space cooling load in air conditioned buildings."

Cory Names John Wallace Eastern Div. Sales Mgr.

CHICAGO — Cory Corp. has announced the appointment of J. W. Wallace as eastern division sales manager.

Wallace has been with Cory in an executive sales capacity for the last eight years. During the last two years he has been serving as sales manager of Cory's midwest division.

In his new capacity, he will supervise all sales activity on Cory, Nicro, and Fresh'nd-Aire products as marketed in the company's New York, New England, Philadelphia, Washington, and Carolina territories.

IT'S HERE... The sensational new Paragon 3000 series time switch




THE BEAUTIFUL NEW Memory Master

CHECK THIS SCOREBOARD
Feature for feature, you can't beat Paragon

FEATURE	PARAGON	MAKE "A"	MAKE "B"	MAKE "C"
Quick-change, easy-add dial trippers. No need to remove dial.	YES	YES	NO	YES
"Torsion-Clutch" Dial drive: permits manual check of switching.	YES	NO	YES	YES
"Quick-Out" movement: rattle-proof, positively fastened.	YES	NO	NO	NO
Motor operating indicator.	YES	YES	NO	NO
Double-Plate, long life movement.	YES	NO	YES	NO
Observation window in case cover.	YES	NO	NO	NO
Super-rigid case: 18 gauge or heavier.	YES	NO	YES	NO
U. I. approved for 30 amp switch capacity at 120 or 240 volts.	YES	NO	NO	YES

NOW, the greatest name in time switches brings you the most advanced time switch ever offered anywhere. It's the Paragon Memory-Master — brand new inside and out — the product of five years of intensive research and development... and backed by 50 years of experience in time-switch design and manufacture.

You've never seen a time control with so many "look ahead" features... the "Quick-Out" movement — locked in — yet quickly removed with no loose parts... the "E-Z Turn" Dial that enables you to "run through" switching operations manually... the "Moto-Vu" operating window that permits an instant check of motor operation... and many other features.

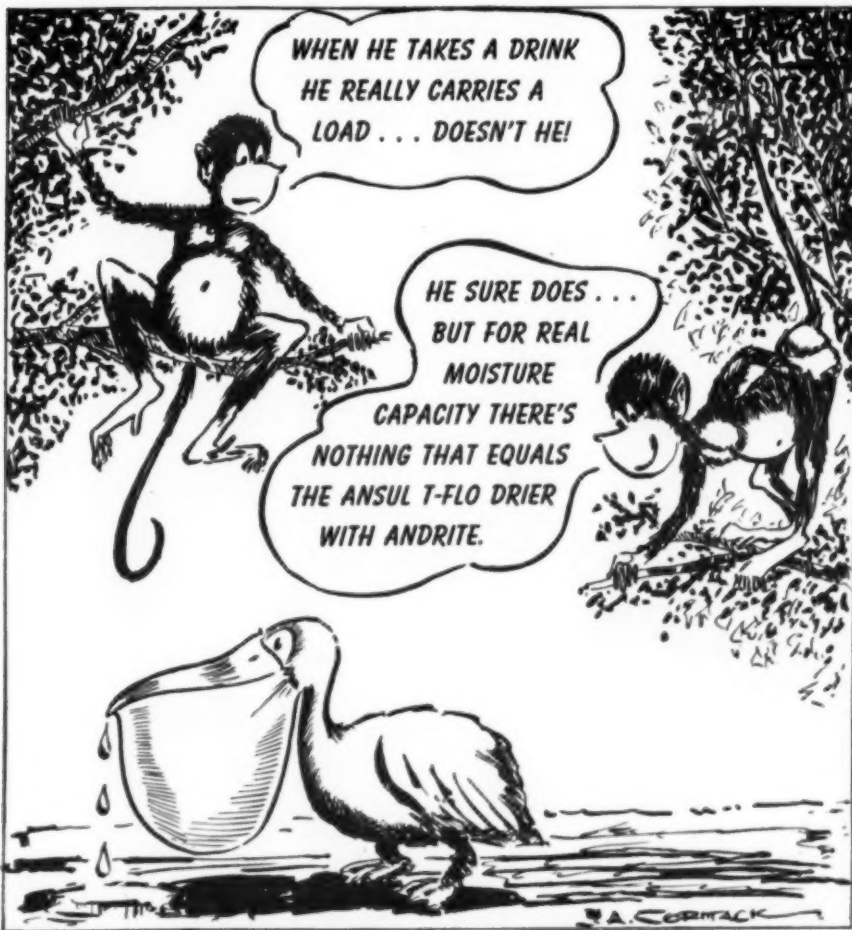
Ask your distributor to show you this great new switch.

And best of all... you get all these features plus **LOWEST PRICE**... from **\$10.50** list



PARAGON ELECTRIC COMPANY
1687, 12th STREET • TWO RIVERS, WISCONSIN

THE SWITCH THAT REMEMBERS... AND LETS YOU FORGET



SEE PAGE 19

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What's New

When requesting further information on new products, please use "Information Center" form.

'Dri-ette' Dehumidifier All Stainless Steel Base

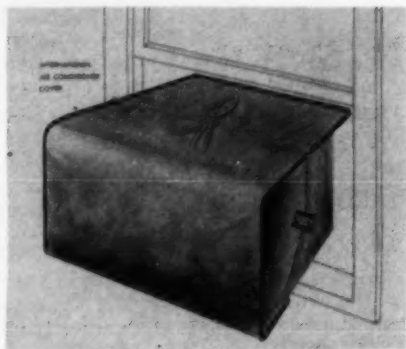
KEY NO. C-920

COLUMBIA, Pa.—United Sound & Signal Co., Inc., manufacturer of refrigerated dispensers for grape and orange juice concentrates, has developed and is currently test-marketing a new household dehumidifier.

Trade-named the "Dri-ette" dehumidifier, the new product has an all-stainless steel base to eliminate completely rust and corrosion. Another feature of the "Dri-ette" is a series of vertical louvers pressed into each side of the cover to supplement the louvered air outlet. These permit a lower-velocity air discharge and more complete dispersion of dried exhaust air.

According to Guy McLaughlin, United's chief engineer, the unit is powered with Kelvinator's new internally-sprung 1/2-hp. compressor.

Concurrent with the establishment of distribution channels, United's sales department is conducting extensive market tests in certain selected areas to determine data which will later be made available to distributors and dealers.



Custom-Made Cover Fits All Room Cooler Units

KEY NO. C-921

NEW YORK CITY — A custom-made cover to fit all room air conditioning units has been announced by International Air Conditioner Cover Div. of International Sh. Pad Co. here.

The cover, to be marketed by the division, is said to protect against snow, sleet, rain, and frost. It is designed to prevent rust, dirt, and cold drafts entering through the vents, and is said to prevent costly servicing and repairs.

The company claims "a perfect fit" for the new cover, which can be quickly slipped on and tied.

Covers are made of gray leather-

ette Velon, a Firestone product said to be waterproof, flame resistant, and self extinguishing.

As a sales stimulator, covers are packed in eye-appealing cartons. Retail prices, depending on the model, year, and size of air conditioner, range from \$6.45 to \$8.45. The company has announced immediate delivery available.

'Pressure-Speed' Oiler Protects Compressor

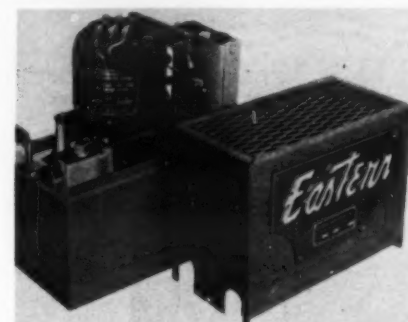
KEY NO. C-922

NUTLEY, N. J. — A "pressure-speed" oiler that makes it possible to add oil to any type of compressor without allowing air, moisture, or other foreign matter to enter the machine has been introduced by Refrigeration Devices Co. here.

The oiler consists of a cylindrical container of 2 in. diameter that holds a quart of oil. It can be filled from a regular 1-gal. oil can without using a funnel, the manufacturer says.

The top cover is held down by four wing nuts which can be made sufficiently tight without using a wrench. All connections to the oiler are on the top, above the oil level so that the entrained oil will not flow out by gravity when disconnecting the oiler feed lines.

To fill a compressor, a connecting line is run from the oiler to the oil port, plug, or valve in the compres-



Condensate Disposal Unit Operates Automatically

KEY NO. C-923

NEW HAVEN, Conn.—A new condensate disposal unit has been announced by Eastern Industries, Inc. The Model #3 Type 100 Unit is completely automatic with mercury switch and is designed to remove hot or cold condensate fluids from the brass receiver tank and pump it to an outside drain.

Simple to install in air conditioning units, it gives quiet, reliable performance with low operation cost, the company says. The compact and rugged construction is rustproof.

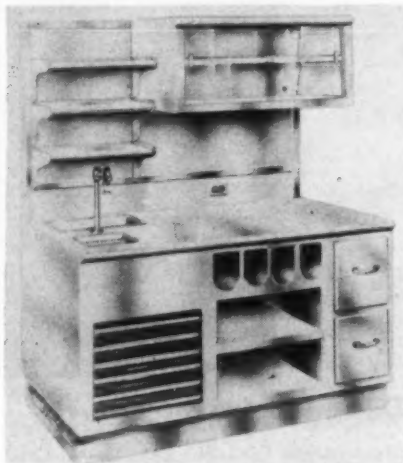
The Model #3 Type 100 has a heavy duty ball bearing induction type motor. The unit measures 5 1/2 in. wide, 10 in. long, 11 1/4 in. high.

drawers, and a warming oven. "The Regal," next in line, has the same color styling.

These two models also feature automatic timing control, four-hour electric "Minit-Minder," timed appliance outlets, and pushbutton pre-heating.

There are also two leader models, "The Crest" and "The Banner." The former has a chrome and white lamp assembly and the "Automaticook."

The company is also introducing a new and restyled line of skirted wringer-washers, headed by a semi-automatic, two-speed, deluxe model.



New Waitress Stations Enable Faster Service

KEY NO. C-929

NEWARK, N. J. — A new line of stainless steel waitress stations, bearing the "Flex-O-Unit" trade name and designed to speed up service, has been announced by Stainless Food Equipment Co. here.

"Beverly" and "Coronado" models differ only in the water station, the company explained. This station is mechanically cooled by a 1/2-hp. compressor and 20-gal. instantaneous cooler in the Beverly, and ice-cooled in the Coronado.

Both models measure 4 ft. 8 in. and have the following features:

Utility section 23 in. long with four pitched silver bins, S/S bottom, and intermediate shelves; bread cabinet 12 in. long, 2 galvanized-lined drawers, and duplex electrical outlet (110 V.); three tumbler storage shelves 20 in. long by 9 1/2 in. wide; pastry case 36 in. long by 14 in. deep by 17 in. high; 70 in. high S/S panel backing.

New Electric Range Line Introduced by Universal

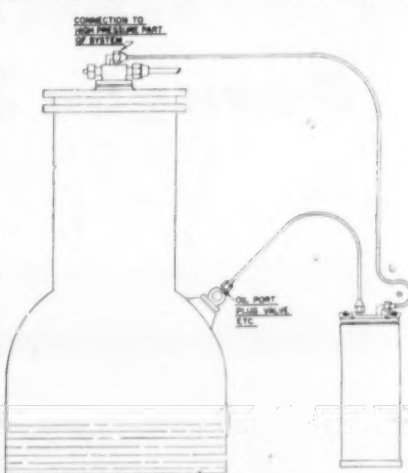
KEY NO. C-924

LIMA, Ohio—A new line of electric ranges with entirely new back-rail designing is now being marketed by Universal Major Elec. Appliances, Inc., according to Harry J. Holbrook, vice president in charge of marketing.

There are five models in the line, including an apartment-size range with four surface burners and large oven designed for use where floor space and housekeeping facilities are limited. Over-all dimensions are 39 in. high, 21 1/2 in. wide, 25 in. deep.

Features of the new line include grouped controls to the right of the seven-speed surface units, and new color styling.

The deluxe model, "The Coronet," has a gold and chrome back rail with fluorescent lighting, control panel in gold and chrome, two large storage



sor. Another line is connected to the high pressure part of the system or to a refrigerant cylinder. The high-side pressure forces the correct charge into the compressor.

Where a crank case is equipped with an oil valve, oil can be added without interrupting the operation of the equipment, the manufacturer says.

L. Lee Richardson of Refrigeration Devices says the present price to the service contractor is \$14.95 each. National distribution is being made through refrigeration supplies wholesalers.

Check!

The finest concealed
Air Conditioner!

DRAYER HANSON

SPOTAIRE

REMOTE AIR CONDITIONER

Quiet beyond belief!

The Spotaire HRC Series individual room unit air conditioner that heats and cools is engineered for concealed installation and designed to function efficiently without noise...so quiet that it's beyond belief. Just check all the advantages offered by the Spotaire Air Conditioner.

The Spotaire VRC Series (also illustrated) surpasses all other floor mounted individual room air conditioners in appearance and quietness of operation.

- Heats or cools, ventilates, filters and dehumidifies.
- Individual room control for convenience, comfort and economy.
- Lower operating and installation costs over other systems. Also eliminates costly ductwork.
- For residential or commercial applications.
- No floor space required.

Long established in commercial refrigeration and air conditioning, Drayer-Hanson offers a complete line of air conditioning and commercial refrigeration products.

Write for details and catalog.

Limited number of territories available for qualified manufacturer's representatives

drayer-hanson

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A FOREMOST NAME IN THE MANUFACTURE OF DIVERSIFIED WIRE PRODUCTS OF SUPERIOR QUALITY

ORIGINATORS OF WIRE & TUBE CONDENSERS FOR STATIC AND FORCED CONVECTION, AND OF WIRE & TUBE FREEZER SHELVES

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Information Center

For more information on What's New products, current literature and catalogs available, equipment advertised in AIR CONDITIONING & REFRIGERATION NEWS use Key Numbers where designated or specify products advertised and we'll see that you receive this information promptly.

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Key No.	Key No.
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Reader Service Dept.

450 W. FORT ST. DETROIT 26, MICHIGAN

What's New (Cont.)



G-E Adds 36-Inch Range With Pushbutton Controls

—KEY NO. C-925—

LOUISVILLE, Ky.—A new deluxe 36-in. range—with pushbutton controls, oven capacity to cook an 18 to 24-person meal, and the complete services of full-size ranges—has been added to the 1953 General Electric range line.

While similar in performance characteristics and general body design to 36-in. range models announced earlier this year, the new range—model J-363L—has a completely integrated backsplash panel.

The surface unit and oven controls, oven timer, two appliance outlets, and a 24-in. built-in fluorescent light are housed in or mounted on the panel.

Proportioned to minimize "dead" or waste space and to offer maximum usable shelf area, the full-size oven is 21 in. wide, 18 in. deep, and 15 in. high. An indication of its capacity is the fact that four cake layers can be baked on one rack.

The wide-front opening and shallow depth facilitate loading, unloading, and cleaning. Metal-enclosed sheath-type broil and bake units are removable to further simplify cleaning.

For top-of-the-range cooking, the new range has four surface units, including one 1,600-watt extra-high-speed unit in the right rear position.

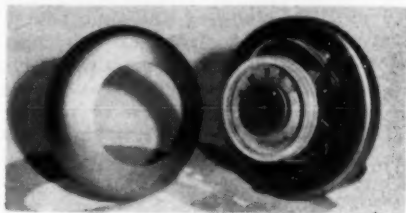
Control is by pushbuttons to permit a quick selection of any one of five different heat levels. A master indicator light and a red "Hot Dot" impressed on the front side of the "OFF" button visibly indicate that a unit has been turned on.

Two base drawers and a special side drawer provide storage space for pots, pans, and other household utensils. The side drawer, which has adjustable and removable vertical partitions, is designed for convenient file-type storage of such elusive items as cookie sheets, pot lids, and cake pans. All drawers have nylon rollers.

Another convenience feature of the new range is the combined fuse receptacle and duplex appliance outlet mounted on the right-hand side of the backsplash panel.

Recommended retail price is \$269.95.

New Round Thermostat Uses Mercury Switch



—KEY NO. C-926—

MINNEAPOLIS — A new round-shaped home thermostat that also includes a mercury switch and a bi-metal temperature indicator has been introduced by Minneapolis-Honeywell Regulator Co.

According to the manufacturer, it represents the first major change in basic styling of home thermostats since they were invented 70 years ago.

The new low voltage T86 will become the company's standard home thermostat and is being made available at no increase in price, explains K. L. Wilson, manager of Honeywell's heating controls division.

The new instrument, which is the shape of half a sphere, was designed by Henry Dreyfus, noted industrial stylist, in cooperation with Honeywell engineers and is the result of four years of development work.

The decorative features are unique. The round design itself is eye-catching and is specifically styled from the standpoint of modern home decorating trends. Secondly, the plastic cover can be easily removed without tools and painted to match any decorating theme.

As Dreyfus described it, the round design "is the form that least intrudes upon architecture and decoration, and easily conditions itself to any style—traditional or contemporary."

Chief among the engineering improvements is an enclosed, dust-free mercury switch which will eliminate the open contact chronic maintenance problems of the older types.

Also introduced for the first time is a bi-metal temperature indicator. An easy to read dial replaces the old clinical type thermometer traditionally used in heating thermostats.

The temperature indicator and the control scale are combined in one easily read dial. The thermostat is set simply by turning a simple knurled plastic ring.

The decorator features also have an important engineering advantage, the company explained. Since the thermostat can be placed on any wall and decorated to match the color scheme of the room, its location can now be chosen with respect to proper sensing of room temperature—the chief function of the instrument.

Many old-fashioned rectangular thermostats were actually hidden behind doors or in closets, due to their appearance. Often such poorly

placed units caused inefficient heating throughout the entire house.

Thermostat designers have sought for many years to replace open contacts in domestic units. With the use of a small mercury switch these contacts are permanently sealed, free from the accumulation of lint, dust, grease, and magnetic particles, a problem in today's sprawling homes with their large windows, drapes, wall-to-wall carpeting, and automatic clothes dryers.

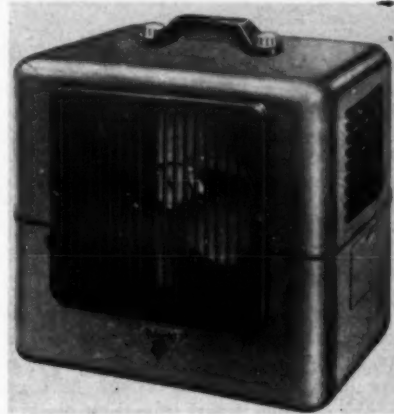
In developing the Honeywell "Round," engineers also have recognized the fact that users often tend to push the control setting up or down, then forget they have done so, resulting in dangerous over or under-heating. In the new instrument, temperature adjustments are provided covering today's accepted comfort limits. Included are adjustable stops to prevent the chronic "thermostat jiggler" from continually getting an uncomfortably high or low setting.

Similarly, a single control point can be set and locked for use in apartments and commercial establishments.

Included in the design also is a fixed differential and an adjustable heater for improved time modulation of burner cycling. The T86 uses a spiral bi-metal element with enough electrical resistance to generate heat within the element itself when the thermostat is drawing current from a primary controller.

In addition to the bi-metal, a separate heater assembly is wired with bi-metal to form a series-parallel circuit. The heater contains a pointer brush assembly adjustable to different heater resistance values. This permits the thermostat heater to be exactly matched to the valve or relay being controlled.

Palmer Unit Heats, Cools Humidifies, Circulates



—KEY NO. C-927—

PHOENIX, Ariz. — Palmer Mfg. Corp. here, subsidiary of McCray Refrigerator Co., Inc., announces the offering to the appliance market of a new Palmer model, the "Palmaire, Jr." an all-year appliance for weather comfort in the home and office.

Priced at \$64.95 the portable Palmaire, Jr. heats, humidifies, and circulates air, and can be used as a spot evaporative cooler.

Styled by Vytant Alecks, it is finished in two-tone green baked enamel to fit into any surroundings. It is approved by Underwriters Laboratories.

As a heating unit, the Palmaire, Jr. has a 1,350-watt heating element that produces 4,600 B.T.U.—enough to warm up chilly rooms in the home or office, the company said.

As a humidifier, it is filled from the

side, through a pull-out trough, with 2 gals. of water. A specially-built Palmer pump circulates water from the reservoir in the bottom of the unit over a specially-developed spun glass pad.

Air is filtered as it is drawn through this pad for distribution by the fan through the dry room. This humidified air can be warmed by means of the heating element or, unheated, the unit acts as an evaporative cooler and can be used wherever evaporative cooling works.

As an air circulator, the Palmaire, Jr. can be used as an electric fan. Weighing 28 lbs., it can be carried from room to room—will circulate 700 cu. ft. of air per minute.

'Pot-of-Cold' Cools Drinks To 35° In 15 Minutes

—KEY NO. C-928—

NEW YORK CITY—Juices, wine, beer, and drinks can be cooled down to 35° in 15 minutes in its "Fahrenheit Pot-of-Cold," according to Chemax Corp. here.

To use the glass Pot-of-Cold, the company explains, a tray of crushed ice, 1½ cups of table salt, and a pint of water are put in it. Then, the bottle or other container to be cooled is inserted in the Pot-of-Cold and moved slowly up and down. This action dissolves the salt and pumps the salt brine over the ice, causing it to melt.

"The Fahrenheit is actually a brine pump in which the bottle serves as a piston-plunger in the piston-chamber formed by the lower cylindrical part of the glass tank," the company says.

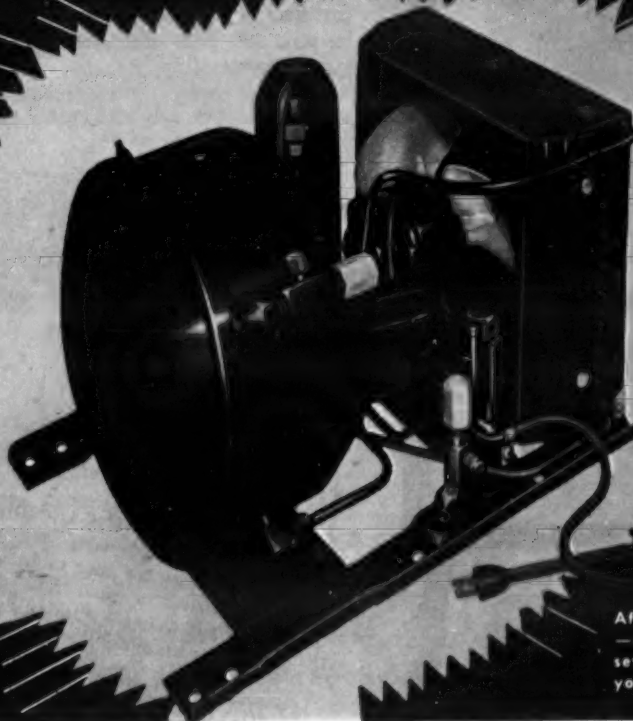
Introducing KELVINATOR'S HERMETICALLY SEALED INTERNALLY-MOUNTED CONDENSING UNITS!

Costs Less!

More Efficient!

Quieter!

Easier To Service!



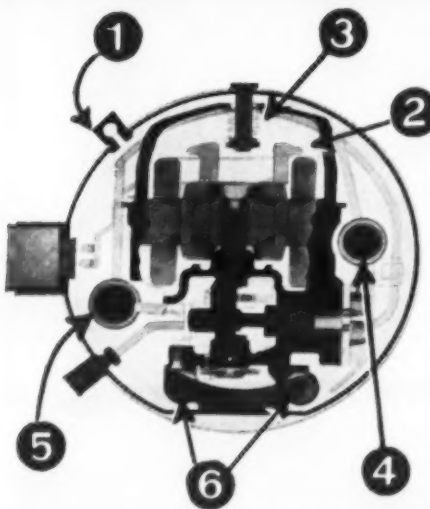
Weights Less!

More Compact!

Easier To Handle!

After 5 years of painstaking engineering—and one year of field testing under severest conditions—Kelvinator brings you the newest-of-all condensing units.

Here's why this new Kelvinator is the finest piece of refrigeration mechanism you can buy...



1. Suction at the top of the dome directs cool refrigerant over motor windings and compressor body. This makes lower operating temperatures and more efficient cooling possible.
2. Fan attached to motor rotor whirls refrigerant to inside walls of dome to get rid of heat faster. Further efficiency. 3. Compressing mechanism

"floats" inside dome—rather than being firmly attached to it. Makes operation practically noiseless.
4. Suction muffler and discharge muffler (5) further contribute to quietest possible operation. 6. Multiple springs are twin stabilizers that absorb torque reactions. Less vibration.

In addition, the new internally-mounted Kelvinator eliminates shipping bolts. It's light in weight, more compact, yet has more-than-ample capacity. It's completely protected against abnormal handling and operating conditions... and has the most foolproof pressure-feed lubricating system. The new plug-in type relay makes it the easiest unit to test and service. On top of all this, it's lower in cost than externally-mounted units. Available from ½ thru ½ H.P. For full information and prompt service, contact your nearest Kelvinator distributor or Zone Office.

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Commercial Refrigeration
for 30 Years

Kelvinator

Division of Nash-Kelvinator Corporation, Detroit 33, Michigan

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How To Operate a Small Dealership

Small But Active Inventory, First-Rate Service Dept., Continuous Advertising Program Will Pay Consistent Dividends

CHICAGO—Some pointers on how to successfully operate a small retail appliance and television business under today's competitive conditions were offered at the mid-year meeting of the National Appliance & Radio-TV Dealers Association by William Wellons, Wellons Mercantile, Inc., Dunn, N. C., "one of the biggest small appliance dealers in North Carolina."

Among other things, Wellons advised small dealers to plan their buying intelligently, advertise continuously on a small scale, have a properly-trained sales force made up of capable, hard-working men, and maintain a first-rate service department.

Good Service Is Good Advertising

Emphasizing the importance of good service, Wellons said: "News of quick service and satisfied customers spreads faster than any other news in the appliance industry. Giving a customer service with a smile and without complaining brings profits as the years go by."

He also told fellow dealers: "What the appliance industry needs is not great operators but good, conscientious operators with civic pride and interest in their customers."

"Follow the Golden Rule. Leave something in every home besides the TV set or appliance; leave something like respect, admiration, genuine

friendship that results from a respectable business transaction honorably transacted."

Discussing the "fundamental necessities of operating a small business," Wellons said, in part:

Don't Over-Buy

"Intelligent planning of buying in order to keep the merchandise needed but not carry a heavy inventory is one of the most important factors. Heavy buying is not advisable with a very few exceptions because of the financing and heavy inventory it will incur."

"On promotions or at certain seasons of the year carload buying might be advisable. If it is necessary to borrow money for carload buying, you will find that the interest on your money will amount to the discount you have earned in buying by carload lots."

"A small operator can anticipate his needs within a three to six-month period and move his inventory. In my operation I move my inventory eight times per year and never allow old models to remain on my floor for a long period of time. Find a buyer! He might be at your finger tips."

"Constant advertising on a small scale which will keep the name of the retailer before the public is also an important factor. The small retailer, in order to do effective advertising, should refrain from full-

page advertising except on special promotions."

"The good manager will also create advertising programs for the interest of the public. In my organization I use a five-minute bulletin board on which is announced free of charge any item that is of news interest to the public, such as church meetings, civic organizations."

Other helpful suggestions are: Organizing sales clubs; small gifts; letters for reopening closed-out accounts; special trade-in sales within specific periods; merchandise certificates; appliance surveys, and house canvassing.

Use Mfrs., Distributors' Advertising Ideas

"It is also to the advantage of the small retailer to take advantage of the advertising ideas offered by the manufacturers and distributors who have trained personnel to offer us these suggestions. In the small retail business it is the responsibility of the manager to keep all these ideas under his control to be used at the most advisable time."

"During the seven years in which I have operated a small retail appliance store with only six employees, the most successful promotion I have used was the 'lucky key' deal (staged in cooperation with a local grocer, who handed out the keys)."

"During the three weeks in June in

which I used this promotion my organization sold 93 refrigerators. All but two of these boxes were sold at list price. The remaining two were sold at 10% discount for cash. Only two of the refrigerators were repossessed. The majority of the boxes sold for \$279.95."

"As a result of this promotion I won second place in a nationwide contest, winning a trip to Chicago and a Roadmaster Buick. I feel that all the hard slugging and good selling were certainly justified on this deal. Not only did this promotion profit me in dollars and cents but it gave me a wonderful build-up in my community as an appliance dealer, proving to my employees and to me what could be accomplished in a short time."

"These promotions and ideas and surveys are good but unless we have a properly-trained sales force that knows its products and can follow up prospects, we cannot get the job done."

"I believe that part of the success of any small business is the amount of hard work involved. There are too many men who have just been order takers too long and they have not yet realized the hard slugging necessary in the appliance business. Long hours of hard work are required."

Must Have Active, Hard-Working Employees

"Especially in the small business there is not room for a deadbeat or a person incapable of learning the merchandise and presenting a sales talk."

"A salesman's time is the most valuable thing that he owns. When a salesman learns to use his time valuably, he has learned the secret of successful selling."

"Not all the successful salesman's time is spent in direct selling. A large amount of it is spent in intelligent planning of prospect routes and methods of securing new prospects. He must also keep an up-to-date prospect file. He must call on prospects regularly."

"Make goodwill visits to let each prospect know that he is still interested in his needs. Little card reminders and congratulations will have an enormous effect on the sale."

"A salesman of a small retailer must be interested in studying the personality of each and every customer, whether they are charge or cash. He must sell him the type merchandise the customer needs and not deliver something that the customer will become dissatisfied with."

"A good salesman must have a great deal of human interest. For example, one of my salesmen recently closed a \$1,500 sale by displaying human interest."

Salesmen Should Be Able To Talk Service

"It is very important that every salesman have a general idea of service and be capable of talking service to his customers—enough so they will realize that he is familiar with the merchandise he is selling."

"It is extremely necessary that every appliance dealer sell service along with the appliance. In our section of the country customers are conscious of the fact that they are buying a name brand because of securing service and parts. I have found during my years of operation that the most important item you can offer a customer is service and assurance that you stock parts needed to repair the appliance."

"The right serviceman can build a tremendous amount of goodwill. If you have a good all-round serviceman who is familiar with the appliance, who has a good personality, and who knows how to talk merchandise and do suggestive selling, your service department can be made the most valuable asset to your business."

"I have found that one of the best forms of advertising in a small retail business is to offer free labor service on appliances even after the warranty period has expired."

"I learned this early in my operations because more people became dissatisfied over the fact that I would charge one, two, and three dollars labor on a service call. For this reason I am successfully operating a service department by employing a serviceman who sells enough parts and merchandise to meet the actual expense of the department. The service department is a very important factor in any business and is not to be taken lightly."

"There are various ways of handling such a department in different localities. From what I can learn, large appliance industries in large cities can sell their services and are

not responsible after the merchandise is installed."

"I am not in a position to say whether this is good or bad, but my service department opens many doors that we would not find otherwise. It goes into homes after the sales are completed and keeps in touch with the customer. News of quick service and satisfied customers spreads faster than any other news in the appliance industry."

Taking a look at the future of the small retailer in today's competitive market, Wellons asked:

"Are we going to start cutting prices to compete with the big chain operator? Are we going to take salesmen off the road to curtail overhead? Are we going to reduce our service department to decrease expenses? Are we going to reduce floor space and advertising? And last but not least, are we going to sell our merchandise to questionable customers at no down payment? Will we do the above things in order to stay in competition with the big operators in the business?"

"If this is your idea of the future of your small business," Wellons stressed, "you had better close your door and start peddling other products."

"I am not making this remark boastfully in any way but I am one of the biggest small appliance dealers in North Carolina."

Turns Inventory 8 to 10 Times a Year

"My record stands for itself. I might not do the volume of the other retailers but I will show as much profit on the amount of inventory. I will turn my appliance inventory eight to ten times per year and I will secure my share of the appliance business in my community."

"I do not want all this business. In fact, some of it I wouldn't have. But I intend to finish with my share of the profits in my community."

"I welcome any appliance dealer to come into our town and operate a retail business as long as he sells at a list price level and operates on a clean competitive basis. The more appliance dealers we have the more appliances we will sell."

"For example, one of my brothers went into Bethesda, Md., and opened a gas station across the street from a gas station already in operation. The station which was already in operation was selling at that time about 25,000 to 30,000 gallons of gas per month."

"Three months after my brother opened his business, each of the stations was selling 50,000 gallons of gas per month and each operator was making the most profit in the history of his business. I feel this proves that more small businesses which operate on a clean competitive basis will increase the profits of each old operator."

Factory, Distributor Cooperation Necessary

"I am aware of the fact that in order to be a success as a small retailer we must have more complete cooperation with the factories and distributors."

"My experience with the distributors has been that they are anxious to sell me all I will buy and request that my bills be paid. They expect me to have enough common sense in order to know when I need to stop buying."

"I believe that in the future our distributors, with the cooperation of the factories, are going to have to spend more time with the small retailer in arranging and outlining advertising programs, merchandising, and sales meetings within the small dealers' organizations."

Want to "clean up" on some extra profits?

Frigidaire Cleaners and Polishes

make good service jobs look even better—bring in easy, extra sales, too!

Specially formulated Frigidaire Preparations can do double duty for you. They can help build customer satisfaction by adding the finishing touch to a service job. And they can also become a steady source of extra profits—because it's easy to sell your customers on using the same professional-type cleaners that you use.

Display these handy cleaners and polishes—carry them with you on service calls—and then just watch those "extra" sales soar!



Frigidaire Surface Renewer is the ideal polish and cleaner for refrigerator cabinets and all other Dulux surfaces—perfect, too, for automobiles, furniture and silverware, and plated metal surfaces. It restores original luster and leaves a tough wax coating to protect surfaces for months. Available in 16-ounce cans. Try selling on every service call—a wonderful way to build good-will for service organizations.



Frigidaire Plastic Cleaner cleans and protects white plastic surfaces such as ice cream cabinet lids, refrigerator door moldings, interior panels. Let your customers know how it prolongs the life of plastic surfaces—eliminates dust-collecting static. Ideal for stainless steel and chromium finishes, too!



Frigidaire Porcelain Speed Cleaner removes stains, dirt and discoloration from porcelain surfaces. Inexpensive, easy to use. Tell customers how handy it is for cleaning and polishing ranges, refrigerators, washers, dryers, sinks, bathroom fixtures.



Frigidaire Nu-Coat produces a beautiful, lasting, protective coat—excellent for all rubber accessories and leather goods. It cleans and waxes refrigerator rubber door seals in one operation. Show your customers how easily it's applied.



This attractive, inexpensive display is available to boost cleaner and polish sales for service shops. See your Frigidaire Parts Distributor.

See your Frigidaire Parts Distributor now, for a supply of these sale-building preparations—there's one near you!

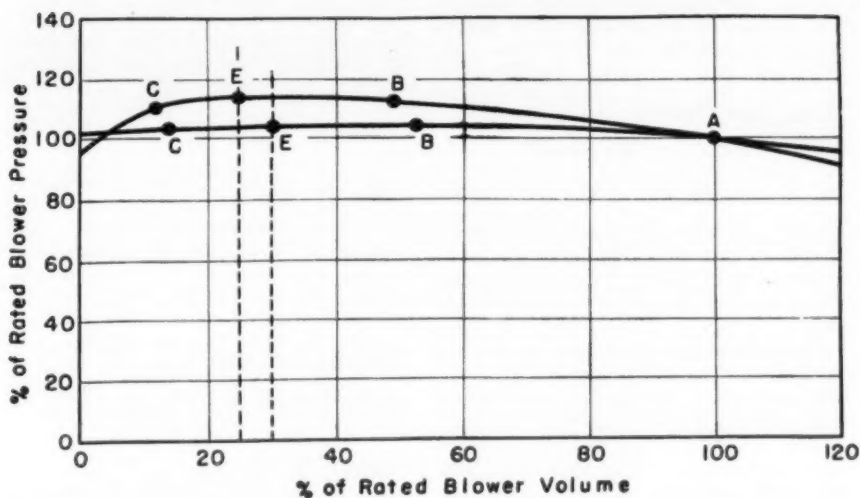
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always specify, always use genuine precision-built Frigidaire Parts and Accessories

IDEAL
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PRODUCTS

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INSTANTANEOUS DRAFT
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(With Refrigerated Faucets)

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IDEAL COOLER CORPORATION
2953 EASTON AVE. - ST. LOUIS 8, MO.



SURGING at low volume can occur with both well designed blower (top curve) and one not so well designed (lower curve).

Blower Pulsation

Steps for Preventing It In New Installation And Curing It In Old One Suggested

SYRACUSE, N. Y.—What causes pulsation and surging with centrifugal blowers when the output volume is sharply reduced and methods to prevent it are suggested by O. W. Acheson of Billmyre Blower Div., Lamson Corp. here.

When a centrifugal blower is used in the capacity range for which it was designed, pulsation is seldom a problem, he says. There are, however, certain applications of blowers where it is necessary to keep the blower running during periods of very small demand.

SURGING MAY CAUSE OVERHEATING

In the case of certain heating processes these "turn-down" or "weekend holding" periods may call

for as little as 10 or 20% of rated volume output of the blower. In such cases, surging can set up a pulsation which may disturb the process and cause overheating and consequent damage.

Such pulsation can be prevented or corrected if one understands the mechanics of pulsation and the characteristics of a centrifugal blower, Acheson explains.

The pressure-vs.-delivery curves shown in the accompanying sketch are typical of all centrifugal blowers, the upper curve being of a well-designed blower, and the lower curve of a "not-so-well" designed blower. Note that in both cases the pressure attains a maximum high point at some relatively low rate of air output, the curve rising at air delivery

rates below this critical value and descending at rates above this critical value.

If the demand on a blower is decreased in volume from a normal operating point, A, to another normal operating point, B, above the maximum-pressure point, the pressure at the blower merely rises correspondingly, and pulsation does not occur. If, however, the load or volume requirement is decreased beyond the maximum-pressure point, E, to a very low point, such as C, the following sequence of circumstances may set up surging.

The blower delivery pressure first decreases from E to C at the blower itself. Thus for a moment, the pressure in the piping system connected to the blower is greater than the pressure at the blower itself. Thus the air in the line tends to reverse its direction and flow back into the blower (this can be extremely dangerous in handling gas to a burner or combustion chamber) until both pressures become equalized.

When this is achieved the blower again resumes its normal function of pumping air into the system until the restriction at the line outlet again reduces throughout and causes the sequence to repeat.

It is this repetition which constitutes surging.

FREQUENCY, INTENSITY DEPEND ON THREE FACTORS

The frequency and intensity of surging depends upon: (1) the slope of the pressure-vs.-volume curve, (2) the rate at which air is being removed from the system, and (3) the volume of the pipe system to which the blower is delivering air. The same principles apply whether the centrifugal

unit is operating as a blower or an exhaustor, Acheson says.

The wisest action to take in the prevention of pulsation is the anticipation of circumstances which might cause it. The phenomenon will not occur in volumes above the point E. If the application is such that low turn-downs are expected, it is prudent to so indicate when the blower is being ordered. The blower manufacturer can, in most cases, select and specify to prevent pulsation.

If, however, pulsation or surging is noticed in a finished installation, any of the following five steps can be taken:

(1) Consider the economics of replacing the blower with a smaller capacity unit having a consequently lower surge point.

(2) Consider purchasing a small capacity unit for turn-down periods.

(3) Make sure that the amount of air delivered by the blower is always above the surge point by bleeding enough air out of the system beyond the blower. If you are handling gas rather than air it will be necessary to recirculate this bleed flow back into the blower inlet. If you recirculate the bleed, however, remember that you are compressing and recompressing that portion of the gas and building up the blower temperature to a point which may be detrimental.

INFREQUENT PULSATION OF SHORT DURATION MAY NOT BE HARMFUL

(4) If the surging is infrequent and of short duration, it may not be harmful to the blower at all. Surging at the point of air or gas use may be eliminated by adding a surge tank or increasing the cubical content of

the piping in front of the nozzle.

(5) Ask the manufacturer to make minor changes in the blower design to permit by-passing of the air, or take other steps which will eliminate the troublesome pulsation at the sacrifice of a little blower efficiency or tightness of the installation.

Actually, the more efficiently a blower operates and the tighter the air system is beyond the blower, the more likely it is to surge at very low operating points. Fortunately, the uses for compressed air or gas, which demand blower operation at critically low output, are infrequent so that high-efficiency equipment can be employed in all but the rarest of cases, Acheson comments.

Standardized Filter Test Equipment, Dust Available

LOUISVILLE, Ky.—The Air Filter Institute has recently announced the availability of standardized test equipment and standardized test dust, in conjunction with the new AFI air filter test code.

The test dust proper may be purchased from Fisher-Klosterman, 2901 Magazine St., Louisville 11, Ky. at an approximate cost of \$780.

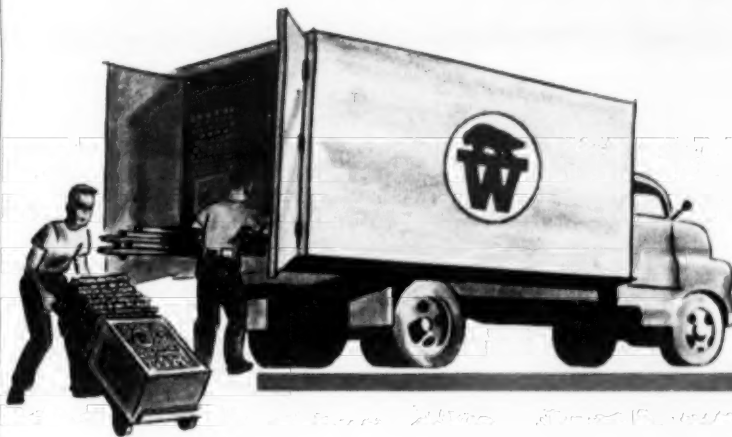
The dust feeding and dispersing equipment is available from Fort-wengler Die and Machine Co., 2828 West Jefferson St., Louisville 12, Ky., at an approximate cost of \$565.

The test dust is prepared and sold by the James H. Herron Laboratories, 1360 W. Third St., Cleveland, Ohio, at \$2.50 per pound.

It is only through the use of standardized equipment, dust, and procedure that accurate and repeatable comparative tests can be made.

Clip this ad for your files!

WOLVERINE HAS HANDY MILL DEPOTS
to help you keep your inventories...



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Here's where they
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Decatur 2900

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1013 Liberty Trust Bldg., Rittenhouse 6-1442-6-3155

PROVIDENCE, R. I.

417 Industrial Trust Bldg., Jackson 1-5941-42

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So that you can keep your inventory of Wolverine products—copper water tube, refrigeration tube, SPS pipe, and automotive tube—from reaching dangerously-low levels, Wolverine operates handy Mill Depots ready to serve you. They are conveniently located and completely stocked. Each Wolverine Mill Depot is geographically situated to serve wholesalers' tubing needs promptly and efficiently. Wolverine can get it there—fast!

Remember—watch your inventory. Order today, direct from a Wolverine Mill Depot for quick service.

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**ANSUL
T-FLO DRIER**
WITH **ANDRITE**

... picks up moisture faster and holds more moisture than any other refrigerant drier!

Easy to install... easier to replace! Lower inventories — four drier sizes and seven fittings provide 28 combinations of installation.

MANUFACTURERS OF REFRIGERANTS, REFRIGERATION PRODUCTS, INDUSTRIAL AND FINE ORGANIC CHEMICALS, LIQUEFIED GASES, DRY CHEMICAL FIRE EXTINGUISHING EQUIPMENT.



ANSUL
Chemical Company

REFRIGERATION DIVISION • MARINETTE, WISCONSIN



Current LITERATURE available

To obtain further information on the literature listed below, please refer to key number preceding listing. Please use the "Information Center" form on "What's New" page.

Kitchen, Laundry Planning Simplified In Booklet

—KEY NO. O-920—

PITTSBURGH—Up-to-date information which simplifies kitchen and laundry planning in the modern home is now available in the form of a 48-page idea manual prepared by the Better Homes Bureau of Westinghouse Electric Corp.

Designed for ready reference by architects, home planners, builders, and home economists, the manual highlights the "how" in kitchen and laundry planning. It is titled "Kitchen-Laundry Design Ideas."

Although planning principles are simple, difficulty is often encountered in applying them, due to size, shape, and openings in rooms. In this new manual, a simplified step-by-step procedure is followed.

The user can readily adapt the principles to kitchens and laundries of any size and shape. Many clear diagrams, dimension drawings, sketches, and illustrations of well-planned kitchens and laundries make planning easier and correct.

The Westinghouse idea manual also

answers questions on space allowance for kitchen and laundry equipment, proper lighting and adequate wiring, and convenience features to supplement basic concepts of kitchen and laundry planning.

Printed in two colors on heavy paper, the book is wire-bound and protected in a sturdy cardboard carton. Single copies are 50 cents each.

Fusite Catalog Presents Feed Through Terminals

—KEY NO. O-921—

CINCINNATI—A new 20-page catalog describing a complete line of hermetically sealed glass-to-steel electrical feed through terminals is now available from the Fusite Corp. here.

Ten different groups of terminals are described and drawn in detail. These include such variations as miniature singles, standard size singles, stand-offs, threaded bushing, multiples, miniature multiples, plug-ins, and crystal can headers. Flange and panel treatments are also described.

Besides the listing of the terminals, pertinent information is also included

on specifications and electrode designs. Soldering suggestions are described while short case histories on the use of the terminals are included.

The Fusite terminals are used to obtain a true hermetic seal that can be soldered or welded into a container and provide a seal, insulation, and current carrying electrodes all in one piece.

Free copies of the new catalogue may be obtained.

Bristol Bulletin Describes Blood Bank Thermometer

—KEY NO. O-922—

WATERBURY, Conn.—Publication of a four-page bulletin, No. T853, describing its new blood bank recording alarm thermometer, has been announced by The Bristol Co. here.

The bulletin gives information about the use of the thermometer on blood banks for recording temperatures held in the refrigerator, and for giving alarm should the temperature rise above or fall below the safe range. It tells how the new instrument can be used to protect the stored blood from becoming too warm should the power fail, or from freezing should the thermostat fail to cut out.

Norge Tells 'What People Want In A Refrigerator'

—KEY NO. O-923—

CHICAGO—A refrigerator with plenty of storage space, not one that eats up floor space, is what the homemaker wants.

That's what Norge is telling its distributors in a new refrigerator

manual announced recently by H. L. (Red) Clary, vice-president in charge of sales of the Norge Div. of the Borg-Warner Corp.

The manual, "What People Want In A Refrigerator," helps distributor salesmen show dealers why net interior capacity, not bulk size, should be the important factor in selling refrigerators.

Shelf storage space is the best indication, the manual continues, and then lists the shelf areas of competitive models and Norge. The manual also compares Norge frozen food capacity in pounds with competitive models.

"Gas Appliance Service Water Heater Manual"

—KEY NO. O-924—

NEW YORK CITY—The fourth edition of the "Gas Appliance Service Water Heater Manual" has been published by the American Gas Association.

The new edition includes the latest in controls plus suggestions for properly selecting, installing, adjusting, and servicing water heaters.

The manual's four sections have been revised to bring the text into line with current industry thinking and practices, outlined in A.S.A.'s Z 21.30, "American Standard Installation of Gas Piping and Gas Appliances in Buildings."

Unnecessary duplication between diagrams and text is eliminated in the manual. Most service information is placed on diagrams to facilitate correlation of such information with the specific control.

This pocket-size edition contains 248 pages bound with metal rings to accommodate insertions. Prices are \$2 for a single copy; \$1.75 for 10 to 99 copies, and \$1.50 for 100 or more.

Folder Tells How To Fix Pipe Line Leaks Quickly

—KEY NO. O-925—

ELLWOOD CITY, Pa.—Details of the method by which pipe leaks of any kind can be permanently repaired in a matter of seconds are covered in free literature on Morris band type repair clamps published by the Morris Coupling & Clamp Co. here.

Folder 201 illustrates the method of installation for both single and double repair clamps and covers complete ordering specifications and prices.

Tenney Offers Bulletin On Air Conditioning Coils

—KEY NO. O-926—

NEWARK, N. J.—A new bulletin, offered by Tenney Engineering, Inc., illustrates and describes the company's new line of standard 4-row air conditioning coils.

These Tenney AC4 coils, available for quick delivery, are designed for use with domestic and commercial comfort-cooling systems.

Included in the bulletin, No. 103-53, is information on coil construction, application data, and prices. Application data for 11 models include model number, nominal tons capacity, dimensions, face area in square feet and recommended air flow in cubic feet per minute. Engineering drawings complement the tabular material.

Also covered are the four styles (for different air flows) in which the coils are available—horizontal left hand, horizontal right hand, vertical down, and vertical up.

Concluding, the bulletin gives information on how to order, prices, and the Tenney warranty.

G-E Bulletin Covers New NEMA Motor Standards

—KEY NO. O-927—

SCHENECTADY, N. Y.—A new bulletin containing complete information on the new NEMA motor standards is available from General Electric Co. here.

The standards, passed by NEMA on May 19 set up new frame dimensions for a.c. motors from 1 to 30 hp.

Designated as GEA-5995, the eight-page two-color publication compares the old with the new frame assignments for open-type polyphase, single-phase, and wound-rotor motors as well as totally-enclosed fan-cooled types.

Also listed are the suggested new frame assignments for foot-mounted and flange-mounted motors, and standards for minimum locked-rotor torque for general purpose single-phase motors.

'Guide to the Use of Anhydrous Ammonia' Issued

—KEY NO. O-928—

NEW YORK CITY—A new, 20-page illustrated manual, "Guide to the Use of Anhydrous Ammonia," has been produced for the users of this chemical, by the Nitrogen Div., Allied Chemical & Dye Corp.

The manual describes the physical and chemical properties, and specifications of anhydrous ammonia in cylinders; and covers its principle applications, handling and operating techniques, and safety instructions to be observed.

In addition, the manual gives detailed instructions on linking cylinders together to achieve the most economical operating results. Charts, technical drawings, and specifications are included to guide the user.



MEET MICHAEL CRAKES
Proprietor of Michael's, one of Minneapolis' newest and most popular suburban restaurants.

"...as good an investment as I've ever made!"

Crystal Tips ICE MAKER

Several months after Maurice Grow of Grow Refrigeration Co. had installed two Crystal Tips Ice Makers in the new Michael's Restaurant, he received a call from the proprietor.

"I just wanted you to know how pleased I am with my two Crystal Tips Ice Makers," Mr. Crakes informed him. "They've been a real help in getting this business off to a good start. I consider them as good an investment as I've ever made."

Every quantity user of ice cubes is a prospect for Crystal Tips Ice Maker. It pays for itself in a short time... costs only a few cents a day for water and electricity... provides a constant, full supply of better ice, always fresh, crystal clear, sanitary and longer-lasting. Investigate the profit possibilities. Available in two styles; with standard 110 lb. storage bin, or with auxiliary storage bin of 360 lb. capacity as illustrated.



AMERICAN AUTOMATIC

1789 FOURTH STREET N. W.

ICE MACHINE CO.

FARIBAULT, MINNESOTA



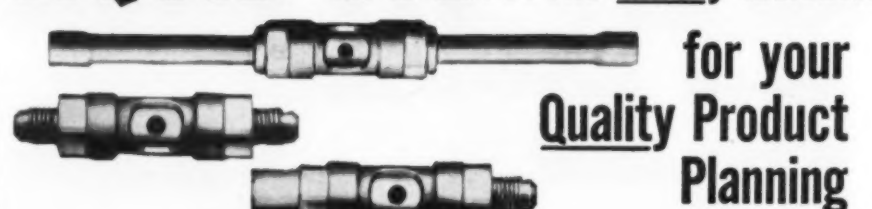
Stop service calls... keep out rust and sludge... open new doors to sales acceptance!—with coolers, ice-makers, sell "Taste-Master"!—checks chlorine, traps sediment; promotes service-free satisfaction with all water processing appliances. Write—

Filtrine MANUFACTURING CO. BROOKLYN 38 • N. Y.

MOTOR BASE ADAPTERS Sell Many Other Items

Keep them in stock. Servicemen will pick up adapters and motors, carry them in their cars, and complete service on the job in one call. Eliminates delay of having motors away for rebuilding. Adapters are easy to install, fit any base. No rotor shaft too long or too short. They also bring you more sales in motors, belts, pulleys, controls, etc. SIZES FOR 1/4 to 3 H.P. Inclusive. Engineering Research Associates, Inc. 3475 East Nine-Mile Road Hazel Park, Michigan

LIQUID EYE®... The Quality Indicator



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- In all sizes and connections to meet your every production problem. Any combination — flare to copper — male to female or male to male flare.
- Liquid Eye reduces service costs through instant analysis of refrigerant charge.
- Field tested over many years — less than 1 in 2,000 units ever returned for any reason.

Original equipment manufacturers have complete confidence in Liquid Eye. Consult with us now about your particular problem.

Allin MANUFACTURING COMPANY 1153 West Grand Ave., Chicago 22, Ill.

Ice Plants to Quick Freezing Plants

Conversion To Keep Abreast of Times Still Leaves Sufficient
Ice Making Capacity To Fill Dwindling Needs

HUMBOLDT, Tenn. — The aggressive ice man is very much on his toes these days and from several signs is going to win a long round of new profits in an allied field; the quick freezing industry.

Typical of the important changes being wrought in the ice industry is the Beare Ice & Coal Co., which has eight plants in west Tennessee. Until a few years ago the total amount of ice flow from these prospering plants averaged 100,000 tons annually. Today it's only 45,000 tons.

Ice Volume Lowered

Mechanically refrigerated trucks, improved refrigerator railroad cars, rural electrification, plus railroads diverting their re-icing points for cars freighted with perishables, accounted for the lowered volume in the ice business.

R. L. Beare, Jr., president of the company, wasted no time waiting for some miracle to revive his business. Endowed with a generous quantity of imagination, aggressiveness, and resourcefulness, the first thing Beare did was to survey his assets.

Sixty years ago his father, the firm's founder, Col. R. L. Beare, installed a 2-ton ice plant at Humboldt, despite pessimism for such a venture being voiced by the community. Today the same ice plant has a daily capacity of 114 tons.

Later, with several plants located on the major railroad lines serving markets to the north and south, Col. Beare actively promoted the raising of cabbage, tomatoes, radishes, okra, lima, spinach, and strawberries. This proved profitable, for the shipment of these farm goods required ice, ice in large quantities. He also erected seasonal storage houses throughout the territory.

Produce Being Shipped Away for Quick Freezing

With a sizeable investment and being in the heart of a rich, productive farming region, the colonel's son witnessed the farm produce his father had so actively promoted being trucked to cities as far away as Cincinnati, St. Louis, and Louisville for quick freezing, as adequate freezing facilities were not then available locally.

In June, 1950 Beare began investigating the possibilities for converting his properties into quick freezing plants, yet reserving sufficient space at his plants to maintain desired ice making capacities.

His survey revealed that the Humboldt area was unquestionably the geographical center of strawberry and lima bean production. He decided to revamp his Humboldt ice plant into a quick freezing plant.

Utilizing only the space formerly used as a cold storage facility, two tunnels were designed and built by York Corp. engineers. Each has a capacity of 125,000 lbs. per day based

on strawberries being packed in 30-lb. tins.

A holding freezer approximately 75 ft. by 60 ft. and a tunnel room approximately 71-ft. square, which would also serve as a low temperature holding room when not in use as a freezer, comprised the first fast freezer conversion at Humboldt.

The design conditions were for -20° F. in the freezer tunnels and 0° to -10° in the holding rooms, all rooms being insulated with 8 in. of corkboard.

Equipment installed consisted of a 16 cylinder, highspeed York V/W 3½ by 3-compressor, and an 8-cylinder York V/W 6½ by 5-booster compressor, having a combined capacity of approximately 97 tons at a -35° evaporator temperature.

The total coils installed in the two tunnels and two holding rooms consisted of approximately 40,000 lin. ft. of 2-in. coil, fed by three liquid ammonia recirculating pumps. Each tunnel was provided with two fans, each fan having a capacity of 30,000 c.f.m.

Ice Making Capacity Left Almost Intact

The ice making capacity of the plant was left almost intact, and much ice from this plant will continue to be used in icing railroad cars and local consumption. It is believed that there will continue to be a large demand for ice in the Humboldt region.

After the Humboldt conversion got under way Beare decided to do something about the "too idle" plant at Jackson, Tenn. At this plant he had a season ice storage of no little size: 98 ft. long by 62 ft. wide by 30 ft. high. The problem was to put it, like Humboldt, on a profitable basis.

With its present floor level 10 ft. below dock level a problem was presented. Ice was raised and lowered to this level by an elevator. To convert to fast freezer lines meant either a two floor building with neither floor accessible to the dock without use of the elevator, or a one floor construction necessitating a 10 ft. fill. The latter plan was selected.

One Freezing Tunnel Ran Length of Building

One freezing tunnel was placed the length of the large storage room leaving the balance of the room for storage with a 20 ft. loft. Two former ice storage spaces which were 98 ft. long by 15 ft. wide by 10 ft. high were converted into holding freezers.

Equipment for the second Beare line of fast freezers is made up of two 16-cylinder York V/W 3½ by 3-compressors, acting as boosters, two ammonia pumps, two 30,000-c.f.m. fans, and 22,000 ft. of 2-in. ammonia recirculating pipe coil. 5,400 lineal feet of 2-in. coil on the ceiling of the present ice storage was converted to

an ammonia recirculating system, and 3,500 lin. ft. of 1¼ in. coil in two holding freezers was converted to ammonia recirculation.

As at Humboldt, the ice making capacity of this plant—104 tons—was not affected, because the compressor capacity from one of the other plants that had been shut down was transferred to the new fast freezer plant to assist on the second stage load.

Should Low Temperature Room Be at Ground Level?

During conversion the advisability of installing low temperature rooms at ground level was questioned, as it has been said that possible damage to the building might result from the freezing of earth below the floor insulation.

Little authentic information on this subject is available. However, since both of the Beare fast freezer lines had by necessity to be constructed at ground level, the research department of the Armstrong Cork Co. of Lancaster, Pa. was consulted. The result was that an elaborate ventilating system was installed at both freezer plants below the sub-floor.

At the Jackson plant thermo couples were buried under the sub-floor slab at levels ranging from 12 in. to 24 in. Others were spotted at various places in the freezing room to facilitate accurate readings of soil temperatures.



For Military Use

Refrigeration Has Big Role In Production Of Weatherproof Waxed Paper Packaging

SAN LEANDRO, Calif. — Refrigeration is playing an important part in the production of weatherproof waxed paper packaging in the laboratory of Western Waxed Paper Co.

The laboratory has been of vital importance since the outbreak of the Korean conflict in the development of packaging capable of withstanding sub-zero and dry heat in the shipment of munitions of war, as well as in improving commercial packaging.

With military need as a constant driving force, Western Waxed Paper has made huge strides in protective packaging in the past three years. Aiding tremendously in such developments are the walk-in refrigerators and test rooms.

Each of the 20-ft. by 10-ft. walk-ins is set up to reproduce precisely climatic conditions which any packaged item may be expected to encounter anywhere in the world. Four of the rooms are constructed with heavy refrigerator-storage doors as the only means of entrance.

The first room, for testing materials

designed for arctic designations, operates at -20° F. The second provides 0° temperature, the third 35 to 50°, and the fourth 80 to 90° F.

In addition, there are two separate "desert" and "tropics" rooms, which, through a combination of humidification and dehumidification equipment, can reproduce temperatures of from 90 to 110°, with relative humidities all the way from 20% to 90%.

Still another room is designed for variable humidity at normal temperatures, switching humidity from 10% to 50% as desired.

Within the space of 50 ft., it is possible to set up climatic conditions which may be encountered, for example, by a case of perishable food products shipped from the United States, via Alaska, to Greenland, across the North Atlantic to Europe and south into Africa.

Refrigeration equipment provided thermostatically maintains temperature within 2° on a year-round basis, while humidifiers and dehumidifiers hold moisture content within 5%.

This Engine is Fast Becoming No. 1 CHOICE for TOUGH JOBS



**CONTINENTAL
RED SEAL
MODEL AU-8**

★ Displacement, 8 cubic in.
Develops 2½ h.p. @ 3600
r.p.m. Torque at moderate
speeds is exceptionally high,
assuring high lugging capacity.
Well suited to the requirements
of refrigeration and
air conditioning equipment,
by reason of its power, dependability
and servicing ease. Shown equipped with
exclusive Contex external
breaker point and fly-weight
type governor assembly. This
Continental "First" has been
widely acclaimed as the most
important air-cooled engine
advance in years.

The Continental Red Seal air-cooled industrial engine line comprises 14 models, from ¾ to 2½ h.p., including six vertical shaft models—three for belt drive and three for direct.

World's most popular
mechanical draft
COOLING
TOWER...

the
**Marley
AQUATOWER**

The simple, fool-proof mechanical draft tower for any job requiring 2 to 60 tons of refrigeration. Stocked in a wide range of sizes and models in 30 cities for immediate delivery. Can be located indoors or out to fit the requirements of any commercial or residential cooling job. See your Marley Representative, or write for Bulletin AQ-53.



The Marley Company
Kansas City, Missouri

Continental Motors Corporation

AIR-COOLED INDUSTRIAL ENGINE DIVISION

12800 KERCHEVAL AVENUE • DETROIT 14, MICHIGAN

Holliday Distributes Amana In Texas, N. M. Territory

AMANA, Iowa — Appointment of The Holliday Distributing Co., division of Duncan and Dupuy, El Paso, Texas, as distributor for Amana freezers was announced recently.

The Holliday Distributing Co. will cover western Texas and the southern half of New Mexico for Amana.

Sales, installation, and service of Amana freezers in this area will be headed by Frank L. Dupuy, owner of the El Paso firm, Sam Holliday, sales manager, and Jerry Bowen, service manager.

Mr. Dealer...

IS YOUR
PROSPECT

Money Minded?



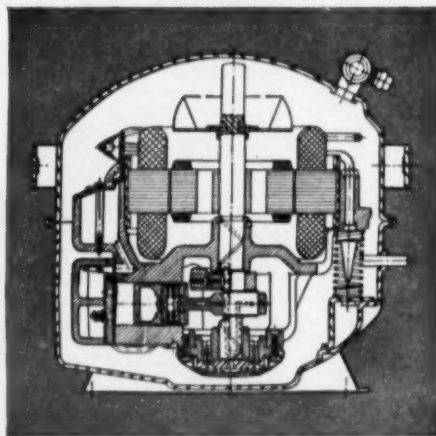
... then tell him about the
THRIFTY
Tecumseh
HERMETICS

• Your prospect doesn't have to be a "Scotchman" to recognize the plus values he gets in a freezer unit equipped with a Tecumseh Hermetic.

• Facts like these: lower price, better performance, greater capacity and lasting dependability with lower operating cost, will convince the most "hard to sell" prospect.

• And you, as a dealer, can't go wrong when you know that 73% of all freezers sold are equipped with Tecumseh Hermetics... your assurance that they are overwhelmingly approved by the freezer industry.

• Why don't you get all the facts about the popular line of Tecumseh Hermetics and make your selling job easier.



REMEMBER THERE ARE
OVER 14 MILLION
TECUMSEH UNITS IN
USE TODAY!

Send for this free booklet today,
it tells all about the Tecumseh
Hermetics. Write Dept. N-2.



TECUMSEH PRODUCTS

TECUMSEH, MICH.

Company

EXPORT DEPT.: 3111 WOODWARD AVE., DETROIT, MICH.



OFF THE CHEST

SEEKS INFORMATION ON CONDENSER CLEANING

Way Engineering Co.
Houston, Texas

Editor:

From time to time we have wondered if anything had come out in the AIR CONDITIONING & REFRIGERATION NEWS relative to a service company making a specialty of cleaning out condensers and more particularly with some description of the equipment they were using.

This is getting to be quite a problem now that we have such a scarcity of water and more and more cooling towers are being erected.

There are some 25 different compounds down this way on the market—some of which are not very good. In fact, we have only found one that we can depend on.

We thought that you might know of some company that is making a specialty of this type of condenser work and we might obtain some pointers so we could go ahead and build up a truck for this particular work so we will only have to carry the hose in to the condenser, thereby keeping the equipment outside so as to avoid damage by spilled acid.

Any information you can give us will be appreciated.

L. C. WAY

OZONE DEFENDED AS ODOR CONTROL MEANS

General Electric Co.
Lamp Division
Application Engineering Department
Nela Park, Cleveland, Ohio

Editor:

The statement in the "Refrigeration Problems and Their Solution" column in the Aug. 10 issue of AIR CONDITIONING & REFRIGERATION NEWS to the effect that "ozone is regarded as extremely dangerous" and that "the medical profession quite naturally frowns on this type of odor control" is doubtless based on Bureau of Standards Circular 491 on Control of Odors.

It is most unfortunate that such statements as these become frequently quoted as gospel truth because they appear in U. S. Government sponsored publications.

Strong statements have also been made about ozone in relatively recent publications of the American Medical Association and in the Consumers' Research Bulletin. Both of these were apparently, in turn, based on a bulletin from the National Bureau of Standards in early 1950 in which there is some discussion of ozone incidental to a detailed review of the whole broad subject of odor control by ventilation, sanitation, and chemical means.

It is unfortunate that in none of these publications was it made clear that such objectionable effects of ozone as have ever been detected have been due, either to very much higher concentrations of ultra-violet produced ozone than can possibly be obtained with our little OZ4S11 lamp in occupied rooms, or from ozone produced by electric devices known to have produced an ozone contaminated in some cases, to the extent of 50% by some of the unstable higher oxides of nitrogen. These unstable higher oxides of nitrogen are known to be

of themselves very toxic and irritating until they have reverted to more stable forms.

It is very unfortunate that the writer of the Bureau of Standards paper did not have access to the authoritative and very detailed review of the whole subject of the toxicity of ozone by C. E. Thorp of the Armour Research Foundation, Illinois Institute of Technology, who is the outstanding expert in the U. S. on the preparations, applications, and properties of ozone, especially since publications from government agencies are generally accepted as the very last word on every subject they discuss.

Our little OZ4S11 lamp produces only pure ozone and cannot build up concentrations in occupied rooms above those rated by the Council on Physical Medicine and Rehabilitation of the A.M.A. as tolerable in the continuously occupied infant wards of hospitals.

The one way in which our promotion of the ozone lamp as an odor control device might be considered new is in the experience that such low concentrations of ozone as are rated by the A.M.A. as permissible in continuously occupied infant wards, and such as are usually not of themselves noticeable in odor, will do a very good job of controlling barely noticeable odors in places where it is impractical to solve the problem by such basic measures as ventilation and sanitation. In the past these low concentrations have been thought of little value and the concentrations of ozone that were tried were of themselves often more objectionable than the odors they masked or dispelled.

L. J. BUTTOLPH

DEATH TRAP CAMPAIGN MUST BE CONTINUOUS

Editor:

I want to personally thank you and I know I speak for the entire Society for the publicity that you have been giving lately in AIR CONDITIONING & REFRIGERATION NEWS on abandoned refrigerators, and particularly in the August 31st issue.

Your editorial was excellent and the poster included on page 13 should be very helpful. Certainly I hope that many of our readers will cut this out and post it in their windows.

As you know, our Society has for several years been carrying on a campaign against leaving these death traps with the doors on. Most of our chapters have offered to remove the latches and hinges without charge if the owners find it difficult to do this themselves and our members have rendered thousands of these old refrigerators impotent in this way.

It has not always been easy to persuade the newspapers, radio stations, and other publicity media to

call this to the attention of the public, but the recent occurrences in which 12 children died in abandoned refrigerators in a period of only about three days did serve to stir up public opinion and finally broke through the general apathy. It is a pitiful thing, however, that it took the death of 12 children to do it.

I understand that advertising, to be effective, must be continuous, so let's all keep pounding away on this theme until there is no one in the country that has not been made aware of the menace to children from the old abandoned refrigerator.

We have adopted a slogan that seems to fit the occasion very well: "DON'T LEAVE A DEATH TRAP."

PAUL B. REED, International
Educational Director, RSES

CONCERTED EFFORT NEEDED TO END JUNKER MENACE

Illinois Association of Refrigeration
Service Engineers Society
Warrenville, Ill.

Editor:

Just a note to say thanks for the swell editorial "Death in a Refrigerator" in your Aug. 31 issue. Also, the large poster that you had on page 13 of the same issue is a wonderful contribution to eliminate the ghastly situations that occur as described in the above mentioned editorial.

It is this kind of concerted effort by all of us in the industry that is going to improve the situation by eliminating these death traps.

We would appreciate receiving (10) additional copies of the poster in accordance with the offer made.

WILLIS STAFFORD

low temperature

**BRAZING
ALLOYS**

**United
WIRE**

LABORATORY
CERTIFIED
ANALYSIS
TO ALL
STANDARD
SPECIFICATIONS

are making strong gas pressure tight joints
every day, everywhere in the refrigeration
and air-conditioning industry... and the
cost is surprisingly low.

BUY... **SIL-BOND**... FOR STEELS
PHOSCO... FOR BRONZE
PHOSCO... FOR COPPER

AT YOUR PARTS WHOLESALE'S
OR OUR NEAREST OFFICE

UNITED WIRE
& SUPPLY CORPORATION
PROVIDENCE, RHODE ISLAND

SALES OFFICES
New York Chicago Springfield, Mass. Philadelphia
Rochester Pittsburgh Lansing, Mich. Los Angeles
Minneapolis Alton Hartford, Conn.

When You **SELL PINNACLE** You Sell

1. Greater Economy!
2. Better Performance!
3. Most Modern Design!
4. A Complete Line!
5. At Competitive Prices!

FREE FOLDERS OF COMPLETE LINE

A few exclusive Pinnacle
Territory Franchises are still
available. Wire or write
today for full information!

Pinnacle
EQUIPMENT CORPORATION

Export Dept.: 39 Broadway, New York

FLEETWOOD, PENNSYLVANIA

Baby it's gonna be cold outside!

That's right. It's time to get prepared for your big winter market... new and replacement Milk Cooler Controls. Your dairy and farm sales'll be hotter than a firecracker when you install Ranco controls... for use when temperature around the milk cooler is COLDER (or warmer) than the water in the cooler... built to protect milk with that just-right Ranco Temperature. So button-up your overcoat and button-up plenty of sales with Ranco Milk Cooler Controls!



Ranco Inc.

COLUMBUS 1, OHIO

WORLD'S LARGEST MANUFACTURER OF REFRIGERATION CONTROLS

Refrigeration Problems

and their solution

by Paul Reed

For Service and Installation Engineers



Paul Reed

'Freon-22' In Window Units (2)

COMPARISON OF CAPILLARY TUBES

Now as to the differences in capillary tubes for "Freon-12" and "Freon-22":

Liquid "Freon-22" has a much greater "net refrigerating effect" than "Freon-12," on a basis both of pounds and cubic inches of liquid refrigerant. Therefore, for the same amount of refrigeration produced, less "Freon-22" needs to be circulated than "Freon-12" in order to give a certain amount of refrigeration.

TABLE 1

Net Refrigerating Effects in B.t.u. per pound, at 130° condensing.

Evaporator Temperature °F	Freon-12	Freon-22
-20	37.18	51.29
-10	38.36	52.42
0	39.52	53.52
10	40.67	54.58
20	41.80	55.63
40	44.02	57.59

The net refrigerating effects, shown in Table 1, are based on 130° F. condensing temperature and on the liquid refrigerant entering the capillary tube at 130°. In practice, this would rarely be true, for in almost all instances, a liquid line to suction line heat exchanger would be used, which would cool the 130° liquid at least ten or fifteen degrees before it entered the capillary tube.

Since less liquid "Freon-22" than "Freon-12" has to be fed to the evaporator (for the same refrigerating capacity) the capillary tube for "Freon-22" will have to have a greater restrictive effect, so the capillary tube for "Freon-22" will

have to be longer than for "Freon-12."

Moreover, the pressure difference across the capillary tube (difference between head pressure and suction pressure) is greater for "Freon-22" than for "Freon-12." This further increases the necessity for a longer capillary tube for "Freon-22" than for "Freon-12," assuming that the bore (inside diameter of the capillary tube) is the same in both cases.

Formulas have been developed, and laboratory constants have been worked out, for estimating the length of capillary tubes for various required capacities, and condensing and evaporator pressures and temperatures.

However, there is a considerable variation in the ratio in the lengths of the capillary tubes for "Freon-12" and "Freon-22," depending upon the bore of the capillary tube and the evaporator or condensing temperatures of the unit on which the capillary tube is to be used.

It is, therefore, not feasible to set up a rule that the capillary tube for "Freon-22" must be any certain percentage longer than for "Freon-12." For one capillary tube bore, or for one set of temperature conditions, the capillary tube for "Freon-22" might be only 50% longer than for "Freon-12"; while for some other bore or set of conditions, the capillary tube for "Freon-22" might have to be over twice as long as for "Freon-12."

CAN PROBABLY USE SAME EVAPORATOR

All of the preceding discussion of the relative lengths of capillary tubes for "Freon-22" is based on their passing enough refrigerant to the evaporator to enable the evaporator to have the same capacity in B.t.u. per hour at the same evaporator temperature.

This is usually the ultimate aim, for the same number of B.t.u. per hour must be removed from a given refrigerator, regardless of what re-

frigerant or what type or size of refrigerating equipment is used.

There is not much difference in the evaporator for "Freon-12" or "Freon-22" for a given refrigerator if the same temperature is to be maintained with the same running time of the condensing unit. If the same evaporator is maintained at the same temperature, using either "Freon-12" or "Freon-22," the same refrigerator temperature will be maintained if the running time of the compressor is the same for the two refrigerants—assuming, of course, that in both instances the heat load on the refrigerator is the same.

This does not mean that the evaporator design is necessarily the same for either "Freon-12" or "Freon-22." There are design differences, particularly as regards oil return. So a given evaporator is not necessarily, and in fact not usually, entirely interchangeable for "Freon-12" or "Freon-22."

It does mean, however, that there is not much difference in the amount of evaporator surface required for "Freon-12" or "Freon-22," if that evaporator surface is kept at the same temperature. There is some difference in the heat transfer charac-

teristics of "Freon-12" and "Freon-22," but not enough to greatly affect the amount of evaporator surface required.

EFFECT OF CHANGE ON COMPRESSOR

It is when we come to the condensing unit that the differences between the two refrigerants become most apparent. If we wished to change a given refrigerator from "Freon-12" to "Freon-22" or vice versa, we could change the capillary tube without too much difficulty; and ordinarily, we could probably use the same evaporator.

The compressor for "Freon-22" needs only about two-thirds as much displacement as a compressor for "Freon-12," for the same capacity. If it were an open-type compressor (belt-driven) perhaps the pulleys could be changed to slow the "Freon-12" compressor down to about two-thirds speed for "Freon-22" or speed up the "Freon-22" compressor about two-thirds for "Freon-12." (These figures of $\frac{2}{3}$ are approximations only and will vary considerably, according to evaporator temperature and other conditions.)

If the compressor displacements are changed, so as to maintain the same capacities, the motor load will remain about the same.

The trouble is that the two refrigerants require considerable differences in compressor designs, even though the compressor displacements are adjusted to obtain the same refrigerating capacity.

There are wide differences in discharge and suction valve sizes and designs, and the "Freon-22" compressor must be able to radiate more heat than the "Freon-12" compressor.

A compressor can be designed for use with either "Freon-12" or "Freon-22," but compromises must be made, and such a compressor may not be of ideal design for either "Freon-12" or "Freon-22."

But if it is a hermetic unit, the situation is almost hopeless. It is impractical to change the motor speed or the compressor displacement of a hermetic unit. As a result, if a "Freon-12" hermetic unit is charged with "Freon-22," the displacement will be far too great for "Freon-22" at the same capacity, and the motor will be heavily overloaded. So much so, that it will almost certainly burn out if the overload relay is blocked or increased in size to keep it from kicking out.

Briefly then: The capillary tube can be changed for "Freon-12" or "Freon-22"; the evaporator will probably get by for either of the two refrigerants; the displacement for open type units can possibly be changed for "Freon-12" or "Freon-22," although because of compressor design differences it will probably not be practicable.

For hermetic units, a change from "Freon-12" to "Freon-22" should not be attempted if for no other reason than that the motor will be excessively overloaded. If a hermetic unit is changed from "Freon-22" to "Freon-12," the compressor displacement will not be enough, and the system will fall far short of having its normal capacity.

As a matter of fact, not only is it rarely feasible to change from "Freon-12" to "Freon-22" or vice versa, but even more rarely are there any advantages to be gained in making the change from one to the other of these two refrigerants.

DOES CLEANING A STRAINER REALLY CURE THE TROUBLE?

When "no refrigeration" is caused by a sludge-clogged strainer, the cure is pretty obvious. But every time you clean the strainer and then let it go at that, you're asking for trouble. It's like fixing a punctured inner tube without pulling the nail out of the tire. You've taken care of the trouble for a while, but it won't be long until the same thing happens again.

Whenever you clean or replace the strainer, the safe thing to do is recharge the system with fresh refrigerant and clean oil. After all, the best refrigeration oil costs less than the oil you change every 1000 miles in your car.

The best way to avoid sludge problems is to recharge with Suniso . . . the refrigeration oil that is used and recommended by most refrigeration manufacturers. Because its quality is controlled from crude oil to can by Sun Oil Company, you can be sure it will always give you the same trouble-free performance.

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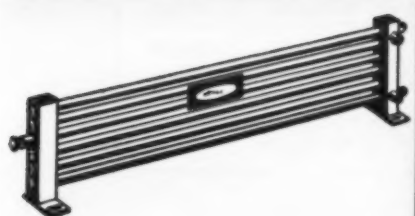
SUNISO ADVANTAGES • provides adequate lubrication at all temperatures encountered in service • possesses a high degree of stability • won't throw out wax deposits under low temperatures • has extremely low moisture content • resists formation of corrosive acids and carbon under service conditions • separates readily from refrigerant—won't react adversely

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Subcool liquid refrigerant . . . increase system capacity with Heat-X heat interchangers. High efficiency inner fins on suction line, provide maximum heat transfer, minimum pressure drop. Available in sizes 1/4 to 100 tons.



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BREWSTER - NEW YORK

35,000 Automobile Cooling Units May Be Produced In 1953, Says 'Wall St. Journal'

NEW YORK CITY—An estimated 30,000 to 35,000 cars will be equipped with air conditioners this year, the *Wall Street Journal* estimated recently, pointing out that this is only a drop in the bucket compared with what is expected to come later.

The *Wall Street Journal* said that General Motors is believed to be turning out 25,000 auto air conditioners this year and to be planning to turn out 100,000 next year.

It commented that Chrysler Corp. reports that its orders for air conditioners are running ahead of production and a special Dodge assembly line had to be set up to install coolers. Previously, designated cars had been taken off the regular assembly line and individually fitted with air conditioners.

Eight of 18 makes of American cars can be bought with factory installed units today, the paper said. They are Buick, Oldsmobile, and Cadillac at General Motors; De Soto, Dodge, and Chrysler at Chrysler; Lincoln at Ford Motor Co., and Packard. Three more auto makers—Studebaker, Nash, and Kaiser—are reported to be experimenting with automobile air conditioners.

The *Wall Street Journal* quotes R. C. Somerville, vice president of Chrysler Corp. in charge of the Dodge Div., as saying: "We feel it's just a matter of time before air conditioning for an auto will be just as desirable in the southern area as a car heater is in the central and northern states."

General Motors, according to Ward's Automotive Reports, believes that by 1955, or after 200,000 cooler installations have been made, the air conditioner might be worked into a combination heating-cooling unit that would save money over buying each unit separately.

In addition to the automobile manufacturers, Frigikar Corp. of Dallas and A.R.A. Mfg. Co. of Fort Worth, Texas are making universal model auto air conditioners that may be installed on almost any make of car. They sell their products to automobile dealers for installation on customers' cars. Officials of both firms were quoted as saying they could not pro-

duce units fast enough to meet the demand.

Said E. A. Lutz, secretary-treasurer of Frigikar: "Demand for our air conditioners this year has been almost fantastic. Based on the firm orders we actually turned down, we know we missed the boat by at least 90% this year. We just didn't build up inventories of completed units and component parts to take care of the demand."

His output was estimated by the *Wall Street Journal* to be 4,000 units this year. "We are not going to be caught this way again," the paper quoted B. M. Moody, Frigikar's general manager. "Next year we plan to build three times as many units as we did this year. Our scheduling will be changed, too. We're going to double our wintertime output so we'll be ready."

The automobile manufacturers are not the only ones becoming more interested in auto air conditioning, the *Wall Street Journal* found. It said that York is planning to market a unit that will operate on a "very revolutionary principle." It will be about the same size and cost as a car heater—far below present prices for auto air conditioning units.

"Fedders-Quigan Corp. is exploring the auto cooling field and is aiming for limited production of a new-type unit next year," said the paper.

"Carrier Corp. has nothing to say on the auto cooling question and other big firms in the field like General Electric, Worthington Corp., Westinghouse, and Remington Corp. still give a flat no to questions about their entering the business," the paper said.

Bohn Names David Walters

DETROIT—David Walters has been appointed chief industrial engineer of Bohn Aluminum and Brass Corp. He will serve on the staff of the operations manager, G. A. Schwenk, it was stated.

Walters is a graduate of Massachusetts Institute of Technology and comes to Bohn from Detroit Aluminum and Brass Corp.

HOW TO APPLY VALVES

By A-P Controls Corp., Milwaukee

This is the second article on condenser water regulating valves in the series on valve application data which began in the May 18, 1953, issue of the NEWS. It is based on excerpts from the Product Application Manual prepared by A-P Controls Corp. and is published with permission.

Condenser Water Regulating Valves (2)

OPERATION OF PRESSURE-TYPE VALVES

With the water valve in the closed position, normal for the off-phase of the machine's cycle, operation of the condensing unit at the start of the running phase of the cycle results in fast build-up of high side or discharge pressure.

Inasmuch as the actuating mechanism of the water valve is connected to the high pressure side of the system, usually at the discharge side of the compressor, pressure build-up depresses the valve bellows and moves the valve toward the open position. At the valve's opening point the rate of water flow to the condenser is relatively small and high-side pressure continues to climb.

The valve moves further towards the full open position, and soon reaches a degree of opening at which the rate of water flow to the condenser is sufficient to dissipate heat from the condensing refrigerant at a rate equal to machine absorbing capacity. When this balance has been established, the condensing unit continues to operate at this discharge pressure.

For this reason, high-side pressure operated water regulating valves maintain constant discharge pressure during machine operation. What this pressure will be, of course, depends upon the valve's adjustment for operation on a particular condensing unit.

WATER FLOW DETERMINED BY SYSTEM HEAT LOAD

Regardless of the heat load on the mechanical system, high-side (discharge) pressure will at all times remain constant during the operation of refrigerating equipment employing high-side pressure-type water valves.

This is due to the fact that an increase or decrease in system heat load results in a corresponding increase or decrease in the volume of gas handled by the condensing unit compressor. A drop in system heat load would, with an air-cooled condenser, result in decreased high side pressure.

However, with a pressure operated water regulating valve, the tendency for system head pressure to decrease due to decreased heat load is quickly compensated for by the valve as it proportionately reduces the flow of condenser water. In this way, head pressure remains constant regardless of heat load, the valve automatically varying the rate of water flow throughout the operating phase of

the cycle in response to heat load variations.

While the water costs vary from place to place, they must always be considered as an item of operating expense and economical water consumption made possible by a high pressure type regulating valve is always desirable.

MODEL 65 VALVE

A-P Controls' high side pressure actuated water regulating valve is designated as the model 65. This valve is manufactured in three sizes of inlet and outlet connections: $\frac{3}{8}$ in., $\frac{1}{2}$ in., and $\frac{3}{4}$ in. f.p.t.

Connection to the high pressure side of the refrigerating system is made by means of a length of small bore tubing with $\frac{1}{4}$ -in. SAE flare nut for connection at the discharge side of the compressor.

The valve is available in two types, the model 65 and the model 65H. Model 65 valves are adjustable over the range 65 p.s.i.g. to 200 p.s.i.g. operating high side pressure.

The model 65H series is designed for those applications such as "Freon-22" systems where higher operating ranges are required. The model 65H valve is adjustable over the range 165 p.s.i.g. to 300 p.s.i.g. operating discharge pressure.

The model 65 water valve may be located at condenser inlet or outlet and may be installed in any position. The most important item in the installation of this water regulating valve is to be sure proper connections are made at valve inlet or outlet.

Due to the design of the valve, reversing the flow of water through the valve will prevent the valve's closing completely at the end of the off phase of the cycle, with resulting condenser water loss while equipment is not in operation.

Valve inlet and outlet are plainly marked and proper connections are extremely important.

(To Be Continued)

Quitmeier Represents Connor In Chicago Area

DANBURY, Conn.—William W. Quitmeier has been named Chicago district manager of Connor Engineering Corp., to supervise industrial and commercial sales of "Kno-Draft" air diffusers and "Dorex" activated carbon air recovery equipment. Quitmeier was formerly with the Powers Regulator Co.



W. W. Quitmeier

Carpenter Heads Omaha General Controls Office

LOS ANGELES—General Controls Co. has appointed Allen S. Carpenter manager of the company's Omaha, Neb. branch office, according to J. F. Ray, vice president in charge of sales.

Carpenter has been with General Controls since 1950 in sales and customer service. His new headquarters are at 610 Keeline building in Omaha.



A. S. Carpenter

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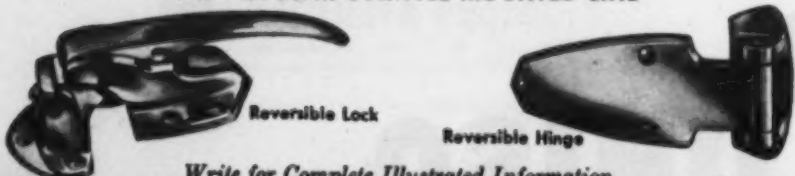
THE ALL-NEW EDMOUNT LINE



The NEW, heavy-duty Edgemount Lock is chrome-plated, operates easily, installs quickly. Surface-mounting eliminates mortising of wood or stamping. Fully reversible lock mounts on either side of door, handle up or down. Strike adjustment $\frac{1}{8}$ " to $\frac{3}{4}$ ".

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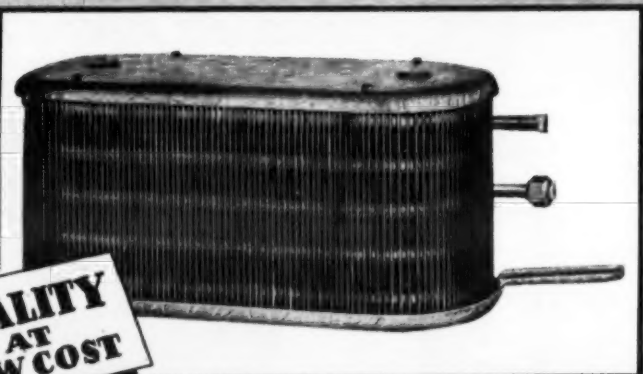
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BETZ CORPORATION
HAMMOND ★ INDIANA

Penn Sales Organization Meets for Parley on New Product, Sales Plans

GOSHEN, Ind.—Penn Controls, Inc. recently held a five-day conference of the entire sales organization at the main office and factory here, according to R. H. Luscombe, general sales manager.

District managers, sales engineers, and representatives from sales offices throughout United States and Canada, as well as company officials and department heads, took part in the conference.

The meeting stressed increased customer service, new products and product information, and new market developments and potentials. Guest speakers, representing some of the major industries served by the company, outlined problems and trends.

Luscombe served as master of ceremonies throughout the conference, assisted by division sales managers K. W. Cash and R. V. Clark.

Albert Penn, president, addressed the opening session and R. S. Penn, executive vice president, and E. B. Maire, vice president and director of sales, conducted special sections of the program devoted to new markets and development of new products.

Central Plant To Cool, Heat Charlotte Shopping Center

CHARLOTTE, N. C.—Amity Supply Co., developer of Cotswold, expects to begin construction of the subdivision's shopping center at an early date. The center will be heated and cooled by a central plant.

The center will include a major department store, a large supermarket, a drugstore, a bank, a professional building, a specialty shop, a men's store, and a hardware.

Chattanooga Electric Home Show Slated for October 13 to 17

CHATTANOOGA, Tenn.—Featuring air conditioned homes and electrically equipped homes, the "Chattanooga Electric Home Show of 1953" will be staged from Oct. 13 to 17 in the new Warner Park Field House.

There will be no official new home for the show, but local builders will have several models completed for the week of the show. These will be promoted by them in connection with the event.

The show itself will contain 160 booths devoted to various products for the home. It will be open from 6 to 10 p.m. on Tuesday through Friday and from 2 to 10 p.m. on Saturday.

According to C. Bert Osborne, show chairman, these hours were decided upon to give distributors and manufacturers' field men time to work with their dealers during the day. It will also make it easier for exhibitors to provide personnel for the booths.

The show is being sponsored jointly by the Electric League of Chattanooga, the Electric Power Board of Chattanooga, and the Chattanooga Association of Home Builders.

Though the show is open to the public, a charge of 25 cents plus tax will be made for admission. Exhibitors, however, will be given 150 tickets for each booth they have at the show for distribution to their customers and friends. These will entitle the holder to admittance on payment of the tax. Children under 12 will be admitted free if accompanied by their parents.

Purpose of the charge is to keep groups of unattended children from spoiling the show for exhibitors, Osborne said.

While the offer of free prizes (customers have to pick up their tickets in dealers stores) is a major attraction, Osborne is planning to have a number of "glamorous attractions" to build up attendance.

These are expected to include a science show, television demonstrations from live closed circuit shows to color exhibitions, atomic energy demonstrations, electric appliance shows, radar demonstrations, and on the spot radio broadcasts.

A strong promotional program using all media is planned to build up interest in the show. The program includes a 50-page newspaper full of advertising and editorial material on "What You Will See at the Electric Home Show."

Universal Major elec Names 2 New Directors

LIMA, Ohio—C. D. Clawson, president of both Ferro Corp., Cleveland, and Ferro Chemical Corp., Bedford, Ohio, and Leo T. Norville, senior partner of the Chicago law firm of Norville & Dent and secretary of Universal Major Elec. Appliances, Inc., have been elected directors of Universal, Morton L. Clark, president, announced recently.

Clawson also is a director of Tuttle & Kift, Inc., Chicago, and Ferro Enamels Ltd., Oakville, Ont., Can., and a member of the board of governors of the Building Research Institute, Inc., Washington, D. C.

Norville also is a director of Cenco Corp., Kropp Forge Co., and Brad Foote Gear Works, Inc., all Chicago, and Standard Investment Co., Lemont Realty Co., and C. D. Gammon Co.

Clark stated that with Herbert W. Schaefer of the investment banking firm of H. W. Schaefer, Baltimore, and T. G. Harris, president of Porcelain Steel Corp., Connersville, Ind., as other "outside" directors this gives the firm a majority of directors representing the public stockholders of whom they are approximately 3,500.

Detroit Builders To Hear About Air Conditioning From Airtemp Specialist

DETROIT—Detroit's leading home builders, meeting Monday evening, Sept. 14, at the Statler hotel, will hear Robert Friedel, Chrysler Airtemp staff specialist, discuss the principal advantages and applications of year-round residential air conditioning.

The presentation will highlight the regular monthly meeting of the Builders Association of Metropolitan Detroit (Bildor).

Friedel will be accompanied by M. T. Bard and F. J. Laughna, Chrysler Airtemp sales executives. A complete display of Airtemp's 1954 year-round residential air conditioning combination units has been arranged by P. J. Dalton, regional sales manager.

Special emphasis will be placed on air-cooled and water-cooled residential air conditioners as the principal sales feature of 1954's new housing program.

Eplett of Johnstown, Pa. Moves to New Building

JOHNSTOWN, Pa.—B. R. Eplett, heating and air conditioning firm, has moved into its new \$115,000 building at Broad St. and Delaware Ave.

The firm was established in 1936 by B. R. Eplett, its present owner, and formerly was located at 603 Grove Ave. The new building serves as the firm's service and retail center and warehouse. It has an 87-car parking lot.

West Hartford Shopping Center Installs Central Air Conditioning, Heating Plant

WEST HARTFORD, Conn.—A central air conditioning and heating system is now being installed and will be operated and maintained by the owner in the Bishop's Corner Shopping Center under construction here.

The central system is being provided as the major feature of an unusual program of services and facilities for the three-story store and office building scheduled for completion in October. It adjoins the Lord & Taylor branch store which opened earlier this year in the 16-acre retail center sponsored by William A. Mauser.

The new unit, designed by Raymond Loewy Associates, with Irving W. Rutherford as architect, Edward Packtor Co., general contractor, and Howard Geoghegan, real estate consultant, features a multi-level plan with first floor stores facing the garden level along Albany Ave. (Route 44) and second floor space fronting on the parking area. The third floor contains office space.

Each store and office tenant on the three main floors will have independent thermostatic control of temperature in his space. The basement area will be furnished with a supply and exhaust ventilating system.

The air conditioning system, as designed by Harry H. Bond, consulting engineer, will operate from a 300-hp. centrifugal compressor providing chilled water to five unit air conditioners on each of the store levels and three units in the office space.

From one to four stores, depending on the areas involved, will be served by each of these units through a system of ductwork equipped with reheat coils to permit individual temperature control. For winter heating the same units will be supplied with steam from two boilers.

During the heating and cooling seasons, 15% fresh air will be introduced into the system directly through the air handling units. In moderate spring and fall weather, 100% outside air will be provided.

Condenser water will be cooled by a cooling tower to be located with the building's elevator machinery in a common roof top enclosure designed to blend into the center's over-all architectural scheme.

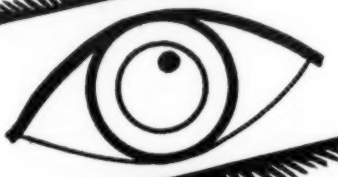
Among the other facilities and services being provided is a complete interior system of unloading, stock distribution, and disposal.

U. S. Radiator Corp. Holds 2 Regional Sales Meetings

DETROIT — Two Regional Sales Meetings, one in Chicago, and the other in New York City, have been held recently by United States Radiator Corp., according to J. Roy Knox, vice president.

An extensive line of new products, including a line of summer air conditioners, three models of boilers, and two models of radiant baseboards, was introduced at these meetings.

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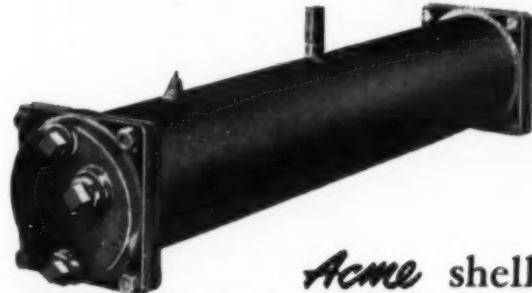
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Capacities ranging from 1/2 to 30 tons. Compact size,
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heads "through bolted" to the tube sheet, and sheets
welded to the condenser shell. Preferred by better equip-
ment manufacturers the world over.



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Inexpensive, efficient. Capacities from 1/2 to 5 tons.
Compact, sturdily constructed, chemically cleanable. All
units have integral fin copper tubing. Acme builds shell
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Shell and Tube, Shell
and Coil Condensers
Receivers, Pipe Coils



Packaged Liquid
Chillers to 225 tons



Flow-Temp Heat
Pumps
Flow-Cold Liquid
Chillers



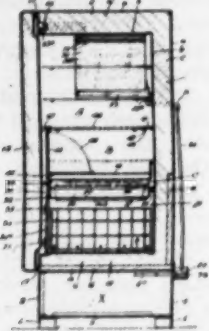
Remote Room
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Continuously serving the refrigeration and air conditioning industry since 1919

PATENTS

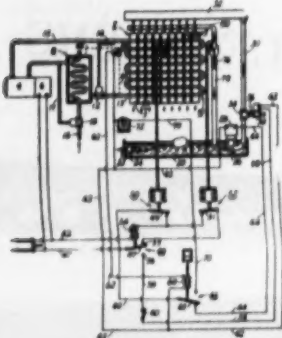
Week of March 31

2,633,003. MULTITEMPERATURE REFRIGERATOR. Wayne D. Jordan, Chicago, Ill. Application September 29, 1950. Serial No. 187,415. 10 Claims. (Cl. 62-4.)



2. In a two-temperature refrigerator, a liner, and insulated enclosure surrounding said liner, an insulating partitioning means separating the interior of said liner into two food storage compartments, refrigerating means for maintaining an above freezing temperature in a warmer compartment, refrigerating means for maintaining a below freezing temperature in a colder compartment, each of said refrigerating means including a refrigerant evaporator, a condensing unit serving both of said refrigerating means, refrigerant conduit means connecting said evaporators in series with said condensing unit, including a duct extending from said condensing unit to the evaporator in the warmer compartment, refrigerant control means adapted to prevent the delivery of volatile refrigerant from the condensing unit to the refrigerating means in the warmer compartment when a predetermined temperature is reached in said warmer compartment, and by-pass means for maintaining a continued supply of volatile refrigerant to the refrigerating means in the colder compartment when said refrigerant control means prevent the delivery of refrigerant to the first refrigerating means.

2,633,004. ICE MAKER. Meldon Gerald Leeson, York, Pa., assignor to Flakice Corp., Brooklyn, N. Y., a corporation of Delaware. Application March 26, 1949. Serial No. 83,603. 8 Claims. (Cl. 62-7.)

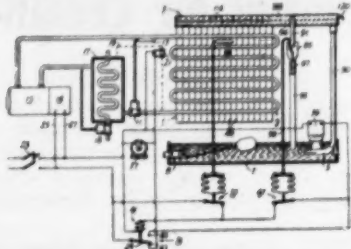


1. In ice-making apparatus, the combination of, a plurality of vertical freezing tubes, refrigeration means to cool said tubes to a freezing temperature, means to circulate water through said tubes in amounts which are in excess of the amounts which are frozen whereby substantially pure water is frozen and water with increased solids concentrations is passed from the tubes, a discharge pipe connected to discharge a controlled portion of the water of increased solids concentrations, a solenoid valve controlling the flow of water through said pipe, and means to add additional water of lesser solids concentrations to the remaining water.

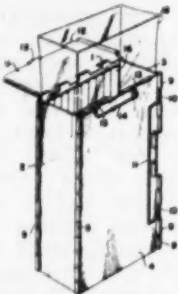
2,633,006. ICE-MAKING. Rodney F. Lauer, Arcadia, and Claude V. Shurtliff, Los Angeles, Calif., assignors to Flakice Corp., Brooklyn, N. Y., a corporation of Delaware. Application July 17, 1950. Serial No. 174,216. 5 Claims. (Cl. 62-7.)

1. In apparatus of the character described, the combination of, ice forming means including, a plurality of refrigerated passageways through which liquid to be frozen flows and within which ice forms so as to restrict the flow near the end of a freezing operation, means to supply the liquid to be frozen to said passageways comprising a plurality of individual nozzles each of which has a single outlet and which are substantially

unrestricted in the sense that they will pass water containing particles of foreign matter and salts, means forming a discharge outlet from each of said passageways adjacent the liquid inlet, and control means responsive to the flow of liquid through said outlet to discontinue the freezing operation.

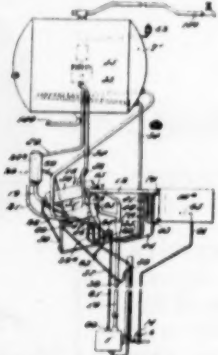


2,633,006. APPARATUS TO PROMOTE CONTROLLED FREEZING. Lloyd G. Taylor, Ellicott City, Md. Application April 18, 1950. Serial No. 156,521. 6 Claims. (Cl. 62-114.)



1. Reusable apparatus for the controlled freezing of food and liquid product units so that the units will stack together evenly, characterized by the units being frozen in solid uniform shapes with all bounding lines of successive units being the same as those of the first unit, comprising a tightly closed and readily openable form, adaptable for complete immersion within a freezing medium and having solid walls excluding the freezing medium from the form, the walls joining each other angularly and providing an inner uniform unit shaping space for the receipt of unfrozen material to all the inner edges of the form that shape the outer contour edges of the unfrozen material into a unit upon freezing to conduct heat therefrom uniformly, resilient and insulating means within the form to promote a slower rate of heat conductivity than that at the said unit shaping edges, said last named means including a member mounted on the inside of the form on one wall thereof in fixed relation thereto and said means being expandable for the expansion of the material upon freezing, the solid walls of the tightly closed form retarding the action of the freezing medium adjacent said member.

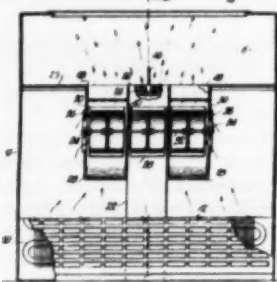
2,633,007. INJECTOR TYPE REFRIGERATING SYSTEM. Eastman A. Weaver, Winchester, Mass., assignor, by mesne assignments, to Stator Co., a corporation of Massachusetts. Application Nov. 19, 1948. Serial No. 60,891. 3 Claims. (Cl. 62-117.65.)



1. In a refrigeration system of the type having an evaporator partially filled with an aqueous refrigerant, a pump for propelling refrigerant vapor from said evaporator, a condenser and return line for receiving the propelled vapor and returning the condensate to the lower part of the evaporator; means for withdrawing aqueous refrigerant from the lower part of said evaporator, mixing it with the condensate and delivering the mixture to the upper part of said evaporator, said means comprising an upright tube having a relatively narrow passage, the lower end of said tube being connected to said return line adjacent to its connection with said evaporator so as to receive both condensate and refrigerant from said evaporator, the upper end of said tube being

connected with the upper part of said evaporator so as to discharge refrigerant therein, and a vapor dome having a closed upper part disposed in heat transfer relation to a relatively warm part of the system, and the lower part of said dome having an opening communicating with the lower end of said tube so as to discharge vapor therein, which conveys the refrigerant upwardly and discharges it into said evaporator, thereby agitating and circulating the refrigerant.

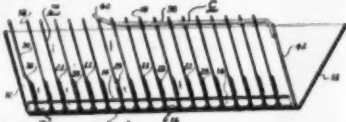
2,633,070. AIR CONDITIONING APPARATUS. Walter E. Gillham, Kansas City, Mo. Application March 26, 1951. Serial No. 217,653. 1 Claim. (Cl. 68-38.)



An air conditioning unit comprising a housing structure providing a lower air conditioning space and an upper air mixing chamber, air conditioning means within said lower space, air recirculating means comprising spaced housing chambers intermediate said air conditioning means and said air mixing chamber, said housing chambers being both positioned in receiving relation to said lower air conditioning space and in discharge relation to said air mixing chamber, a shaft carrying rotary fan elements within said housing chambers and also a turbine driving element in the space between said chambers, and means for conducting a flow of primary air under pressure in driving relation to said turbine element and thereafter discharging said flow of primary air into said upper air mixing chamber.

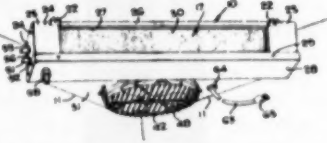
Week of April 7

2,633,715. HOME REFRIGERATION UNIT ICE TRAY. Morris H. Foster, South Charleston, W. Va. Application April 26, 1950. Serial No. 158,906. 8 Claims. (Cl. 62-108.5.)



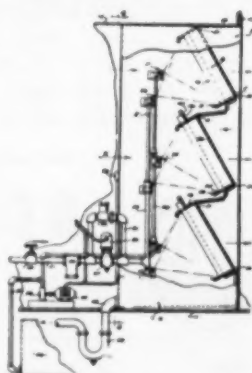
1. A grid for an ice tray comprising spaced means, a plurality of spaced plates, and means pivotally mounting said plates on said spaced means, said means for pivotally mounting said plates on said spaced means including a series of notches in said spaced means, and spring means mounted on each plate for engagement with one of said notches, said spring means being under tension whereby said spring means is continually urged upwardly in said notches.

2,633,718. COOLER MEANS FOR PLACEMENT IN A CORNER. Daniel D. Wile, Whittier, Calif., assignor to Refrigeration Engineering, Inc., Los Angeles, Calif., a corporation of California. Application Nov. 13, 1950. Serial No. 195,280. 11 Claims. (Cl. 62-140.)



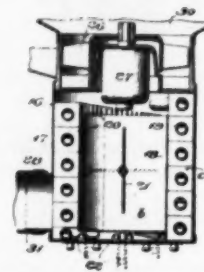
1. In a device of the class described, the combination of: a shallow casing having a top wall and a pair of vertical side walls positioned in substantially perpendicular planes so that the casing may be positioned in the corner of a room adjacent the ceiling, the casing being provided with a bottom wall having an opening, an elongated heat exchanger unit mounted within the casing and extending horizontally between the diverging ends of said side walls, and a power driven fan assembly mounted on the bottom wall for inducing a flow of air through said opening and said heat exchanger unit, a major portion of the height of the power driven fan assembly lying between horizontal planes defining the top and bottom of the heat exchanger unit.

2,633,929. APPARATUS FOR FILTERING AIR. Richard S. Farr, Los Angeles, Calif., assignor to Farr Co., Los Angeles, Calif., a corporation of California. Application Aug. 24, 1948. Serial No. 45,936. 14 Claims. (Cl. 183-52.)



1. Apparatus of the character described including, an air duct, a filter in the duct, means delivering water to the filter including a control valve, means spraying oil onto the filter including a nozzle, a pump supplying oil to the nozzle, and a motor driving the pump, and control means including a switch controlling the valve, a switch controlling the motor, and a timer controlling the switches.

2,634,107. VENTILATING APPARATUS WITH HEAT EXCHANGER. Franz J. Kurth, Mamaroneck, N. Y., assignor to Anemostat Corp. of America, New York, N. Y., a corporation of Delaware. Application Nov. 3, 1949. Serial No. 125,225. 4 Claims. (Cl. 257-137.)



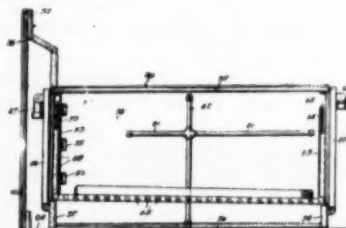
1. In apparatus of the character described, an air heating and by-pass unit comprising a pair of tubular members one of which is disposed within and spaced from the other and each of which is open at the rear end of the unit for inlet of air thereto and open at the front end of the unit for outlet of air therefrom, air heating means in the space between said members, a damper in the inner of said members for regulating flow of air therethrough, a pair of shutters adjacent to the front end of the inner of said members pivoted on axes extending at substantially right angles to the longitudinal axes of said members for regulating in major amount flow from said inner member of all air passing through the latter, a pair of shutters located at opposite sides, respectively, of said first mentioned shutters adjacent to the front end of the space between said members and in alignment with said space and also pivoted on axes extending at substantially right angles to the longitudinal axes of said members for regulating in major amount flow from said space of all air passing through said space, and a duct leading laterally from said space at a point rearwardly of said shutters.

2,634,108. HEAT EXCHANGER. Henry F. Rohmann, Evansville, Ind., assignor to Servel, Inc., New York, N. Y., a corporation of Delaware. Application Oct. 28, 1948. Serial No. 56,972. 1 Claim. (Cl. 257-246.)



A heat exchanger connected between elements in a refrigeration system comprising an inner section of ordinary tubing, an outer section of ordinary tubing, and intermediate sections of ordinary tubing telescoped between and extending from the inner and outer tubing sections at opposite ends thereof, the inner and outer peripheries of said intermediate tubing sections having a close fit with the inner and outer tubing sections to provide capillary spaces therebetween, a eutectic iron-phosphorus alloy in said capillary spaces to seal the joints, inlet and outlet ports adjacent the opposite ends of the outer tubing section, the interior of the inner tubing section providing one path of flow and the annular chamber between the inner and outer sections providing a second path of flow in heat exchange with the first path of flow, and the intermediate tubing sections forming extensions of the path of flow through the inner tubing section and adapted to be connected to other elements of the refrigeration system.

2,634,187. MILK COOLING ARRANGEMENT. Chester A. Thomas, Lake Forest, Ill., assignor to Babson Bros. Co., a corporation of Illinois. Application Aug. 17, 1950. Serial No. 180,000. 7 Claims. (Cl. 312-236.)



1. A milk can cooling arrangement of the character described, comprising: a cooling cabinet having means for cooling milk cans therein; entry door means in one side of said cabinet comprising spring hinged door means adapted to provide an opening for placing milk cans therein, whereby said door means swing inside said cabinet when actuated by the weight of a milk can entering said cabinet through said opening, and said spring hinges urge said door means toward closed position; removal door means in another side of said cabinet adapted to provide an opening for removing milk cans therefrom; and means in said cabinet for facilitating movement of milk cans from said entry door means to said removal door means, comprising a plurality of elongated rollers extending generally transversely of the path of movement of said cans between said openings and forming a supporting surface sloping downwardly in the direction of said removal door means.

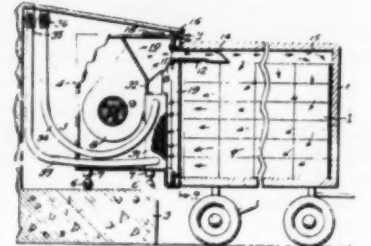
AVAILABLE FOR LICENSE OR SALE

General Electric Co. offers the following patent for non-exclusive licensing on reasonable terms to domestic manufacturers. Applications for license may be addressed to the Manager, Patent Services Department, General Electric Co., 1 River Road, Schenectady, N. Y.

Pat. 2,606,426. Water Disposal Arrangement for Refrigerators. Aug. 12, 1952. A drain water disposal assembly for a refrigerator includes an arrangement in which a space of capillary size is provided between a flat elongated vertical strip and a rod secured to the strip. Water discharged onto the strip is caused to follow a path between the strip and rod because of the surface tension of the water. Group 35-84. Reg. No. 50,537.

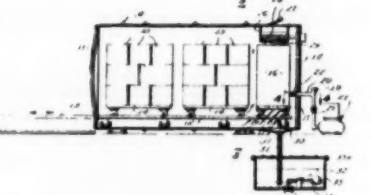
Week of April 14

2,634,589. APPARATUS FOR PRE-COOLING TRANSPORTATION VEHICLES. Broadus Wilson, Raleigh, N. C., and Hipolit M. Hince, Miami, Fla., assignors to Southern Air Conditioning Corp., a corporation of Florida. Application Sept. 12, 1949. Serial No. 115,231. 9 Claims. (Cl. 62-102.)



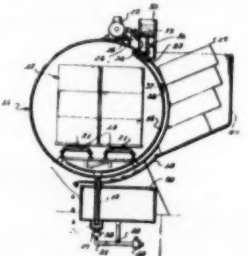
1. In a pre-cooler for pre-cooling the load-carrying compartment of a vehicle, said compartment being enclosed except for a loading opening in one wall thereof, a frame, a pre-cooling unit comprising a heat exchange unit and a power-driven blower in adjacent cooperative relation, means mounting said unit on said frame for movement through said loading opening into said compartment, and closure means fixed in relation with said unit and movable as a unit therewith in response to movement of said pre-cooling unit into said compartment, to close that portion of said loading opening transversely by said unit.

2,634,590. METHOD AND MEANS FOR COOLING PRODUCE BY USE OF REDUCED PRESSURE. Melville W. Beardsley, Venice, Calif. Application Feb. 22, 1950. Serial No. 146,794. 21 Claims. (Cl. 62-168.)



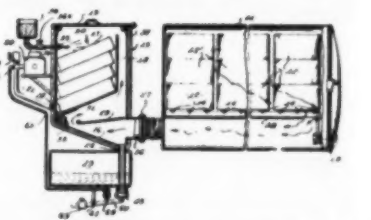
4. In apparatus for vacuum cooling produce: an air-tight chamber having an access door to admit produce for cooling therein; means to support a cold body in said chamber together with said produce therein; a pump connected by a passage to withdraw fluid from said chamber; and a manifold extending into said chamber and connected to said passage, said manifold having a plurality of suction ports in close proximity to said body-supporting means whereby to constrain the flow of fluid from said chamber to a path past a body supported on said supporting means.

2,634,591. VACUUM COOLING SYSTEM EMPLOYING CHAMBER SURFACE CONDENSATION. Melville W. Beardsley, Venice, Calif. Application Sept. 15, 1950. Serial No. 184,915. 18 Claims. (Cl. 62-168.)



1. A method of cooling material having surface moisture thereon which includes the steps of: placing the material to be cooled in an airtight enclosure; refrigerating a wall of said enclosure; removing substantially all air from said enclosure to effect rapid evaporation of said surface moisture; introducing a vapor-pressure-reducing material into said chamber adjacent said refrigerated wall to lower the vapor pressure of moisture condensing thereon; and leaving said material in said enclosure until the temperatures of said material and said wall are substantially equal, due to latent heat of evaporation being taken up from said material by said evaporated moisture and given up at said wall by condensation of said moisture thereon.

2,634,592. VACUUM VAPORIZATION-CONDENSATION COOLING SYSTEM. Melville W. Beardsley, Venice, Calif. Application Oct. 10, 1950. Serial No. 189,468. 15 Claims. (Cl. 62-169.)



1. In a vacuum cooling system of the class described: a hermetic enclosure having a sealable access door to receive material for treatment in said enclosure; evacuation and condensation means including a chamber having a cold surface therein, a vacuum pump connected to said chamber to evacuate the same, and conduit means connected to said enclosure to intercommunicate said chamber and enclosure; and means to direct liquid condensate forming on said cold surface to a point in said chamber adjacent the influx of vapor and air from said conduit means whereby the air-vapor mixture drawn from said enclosure through said chamber first passes in heat transfer relation past said condensate and then in contact with said cold surface.

(To Be Continued)

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Government Contracts

PROCUREMENT INFORMATION

The following is a list of proposed procurements issued by the various indicated U. S. Government procurement offices. This list is compiled and made available daily on a free pick-up basis. Prospective bidders may obtain complete bid sets by a request to the purchasing officer under which the purchase is listed in this Synopsis. Be sure to identify completely the bid invitation you wish by including in your request the item description, the invitation number or reference number and the opening date. This will save time in filling your request. For reasons of economy, specifications are normally not included with the bid invitations unless the specification is a new one. First time bidders on a particular item should request a copy of applicable specifications and drawings at the time the request for a bid is made.

It is not necessary to refer solely to the issuing office for additional data on a bid invitation issued by any of the following U. S. Army Ordnance Offices: Ordnance Tank Automotive Center; Detroit Arsenal; Frankford Arsenal; Picatinny Arsenal; Baritan Arsenal; Ordnance Ammunition Center, Joliet, Ill.; Rock Island Arsenal; Springfield Armory; Watertown Arsenal; and Watervliet Arsenal. Complete information on any purchase listed by any of those offices alone can be obtained from the Ordnance District Office nearest you. Its address is on file in your nearest Department of Commerce Field Office. Do not ask an Ordnance District Office for information on a purchase unless it is listed by one of the above-named offices. Ordnance District Offices do not have information on any other purchases.

Invitations for Bids numbers will be followed by the letter "B." Requests for proposals or quotations will be indicated in this column by the letter "Q." or, if numbered, the number will be followed by the letter "Q."

DEPARTMENT OF DEFENSE

Description	Quantity	Invitation No.	Opening Date
Sacramento District, Corps of Engineers, Sacramento, California			
Evaporative cooling for airmen's Job		(ENG-04-167-54)	29 Sep 53
dormitories mess at Beale Air Force Base, Calif. and administration buildings.			
General Stores, Supply Office, 700 Robbins Ave., Philadelphia 11, Pennsylvania			
Refrigeration type K hard drawn form 1 Fed. Spec. WW. T. 799A Amend 1.	2,000 ea.	3-1695-B	23 Sep 53
Refrigeration deoxidized and dehydrated ends are sealed with solder after pinching or metal caps or plugs are to exclude moisture or vapor Fed. Spec. WW. T. 799A Amend 1.	1,000 coil	3-1695	23 Sep 53
General Services Administration, Business Service Center, Region 3, Washington, D. C.			
Towers, air conditioning cooling, 10-ton.	3 ea.	(4A-34654-R)	1 Oct 53
Ventilating Unit	1 ea.	(4A-34654-R)	1 Oct 53

CONTRACTS AWARDED THROUGH SEPT. 8

Chicago Quartermaster Depot, U. S. Army, 1819 W. Pershing Rd., Chicago 9, Illinois
Refrigerator (Q) Portable, walk-in, -145 ea., \$149,070.—U. S. Thermo Control Co., 44 S. 12th St., Minneapolis 3, Minn.

Thor Names Bruno-New York As Latham Drops Appliances

CHICAGO—Bruno-New York, Inc. has been designated exclusive New York City and metropolitan area distributor for Thor Corp., it was announced by Thomas R. Chadwick, general sales manager, and Owen Nugent, vice president for Thor, and Jerome Harris, president, and Irving Sarnoff, executive vice president, Bruno-New York.

E. B. Latham Co., until now, and for 40 years N. Y. distributor for Thor, is going out of the major appliance distribution field and will devote its efforts exclusively to the electric supply field.

Sutton's Moves To Clive St.

WEST PALM BEACH, Fla.—Sutton's appliance store here recently moved to new, larger quarters at 330 S. Clive at Fern, according to George Tanner.

Featured items are air conditioners and television sets, the company indicated.

NAED Appoints Hoehling Public Relations Chief

NEW YORK CITY—A. A. Hoehling has been appointed public relations manager of the National Association of Electrical Distributors, with headquarters at 290 Madison Ave. here, it was announced by Charles G. Pyle, executive director.

Most recently with Bell Telephone Laboratories, Hoehling was formerly in airline publicity here and in Chicago. He reported for five years for the Washington, D. C. newspapers, and has written articles for national magazines and syndicates.

J. P. Wright Heads Mfg. For Florence Stove Co.

GARDNER, Mass.—John P. Wright has been appointed vice president in charge of all manufacturing operations for Florence Stove Co.'s three plants at Gardner, Mass., Kankakee, Ill., and Lewisburg, Tenn.

Wright comes to Florence from Liquid Carbonic Corp.

NEMA Allows More Hp. To Frame Size In Electric Motors

DETROIT—New broad standards allowing more horsepower to a frame size for all of the popular high production alternating current type electric motors from 1 to 30 hp., were announced by C. O. Hedges, chairman of the Motor and Generator Section of the National Electrical Manufacturers Association, in a recent meeting with representatives from the automotive and machine tool industries.

Advent of superior synthetic insulating materials, new and better silicon steels, and improved techniques as well as real advances in the art of motor design, are cited as developments which permit packing more horsepower into electric motors for a given size and space.

RETAINS FRAME NUMBERING SYSTEM

"The new motors," Mr. Hedges declared, "will continue to satisfy fully the same performance standards of torque, temperature rise, and starting current limitation as before. These standards, while using a fewer number of frame sizes to cover this range of horsepower, retains the previous frame numbering system."

"Complete data on derivatives, types of mountings, etc., are now available as a result of the Section's approval of its committee work. Frame assignments have been made to cover the two through 12-pole speed ratings for the open end, of particular interest to your industries, the totally-enclosed fan-cooled types."

"As in the past, the standards have been laid out to afford maximum interchangeability between the totally-enclosed fan-cooled ratings and the open-type ratings by utilizing the same horsepower-frame relationship as far as possible."

ADVANTAGES OUTWEIGH HARDSHIPS

"In this re-rating program" he continued, "for a while there will be some industrial users of electric motors who will have to stock additional renewal parts and, perhaps, additional spare motors during the transition period. But, more horsepower for a given size, lower space and storage costs, more economical mounting platforms, and easier installation and maintenance are advantages of the change-over which will shortly out-weigh all other considerations."

"For the electric motor manufacturers," he pointed out, "the new standards, for the first time in 25 years, offer an opportunity to make full use of new techniques and technological advances. However, the new program, for them, involves a substantial amount of engineering, development, testing, and re-training of factory personnel, as well as changes in production facilities and techniques."

"Therefore, it is estimated that the first of the new motors should become generally available early in 1954. Naturally, each company will determine and announce when its motors, built to the new standards, will be ready."

Seeger Sales, Earnings In 9 Mos. Up Over Year Ago

ST. PAUL, Minn.—Net earnings of Seeger Refrigerator Co. in the nine months ended May 31, 1953 were \$3,830,998 after provision for taxes, compared with \$3,345,324 after taxes in the corresponding nine months the year before, John S. Holl, president, reported to stockholders.

These latest earnings equaled \$3.43 a share on the company's 1,117,165 shares of capital stock outstanding.

compared with \$3.02 a share on 1,107,900 shares of capital stock outstanding in the comparable nine months of the preceding fiscal year.

Net sales amounted to \$87,621,306, as against \$80,534,143 in the corresponding period the year before.

"Indications point to a good last quarter which means a successful year for the company," Holl further stated.

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CLASSIFIED ADVERTISING

RATES for "Positions Wanted" \$5.00 per insertion. Limit 50 words. 10¢ per word over 50.

RATES for all other classifications \$7.50 per insertion. Limit 50 words. 15¢ per word over 50.

ADVERTISEMENTS set in usual classified style. Box addresses count as five words, other addresses by actual word count. Please send payment with order.

POSITIONS AVAILABLE

ENGINEER EXPERIENCED in design of domestic gas appliances, especially central heating and air conditioning. Salary commensurate with ability. Write complete resume of experience and education to CHATTANOOGA IMPLEMENT & MANUFACTURING CO., Chattanooga, Tennessee.

SALES and serviceman with complete service knowledge of Freon systems to 5 h.p. and electrical controls. New line with large manufacturer. The opportunity is outstanding for an aggressive man in the under 40 age group. Location—Chicago, and there will be considerable traveling. Write fully, please, and in confidence. DEPARTMENT M, Box 29, Melrose Park, Illinois.

THE COLEMAN Company, Inc., has opening for application engineer with experience in residential heating (forced warm air) and year-round air conditioning. Some administrative experience also required. Excellent opportunity for advancement with an industry leader. Submit resume to J. D. ECKLES, National Service Manager, The Coleman Company, Inc., Wichita, Kansas.

REFRIGERATION SERVICE man. Must have good personality, managerial ability, and ability to get along with people. At least five years' experience in commercial refrigeration and erection and installation of modern equipment, preferably with knowledge of McCray refrigeration. This is a permanent connection, to one who is qualified, with an establishment 32 years in business on Florida's west coast. Reply, giving full details, with references from those who previously employed you, as well as character references from non-relatives and others not previous employers. POST OFFICE BOX 98, Tampa, Florida.

WANTED: DISTRICT managers. Positions are now open in our organization for two experienced air conditioning sales engineers, to cover established territories from headquarters in Atlanta, Georgia and Memphis, Tennessee. Salary, expenses, and realistic income plan. Must be able to design and lay out heating and cooling system, and to find, develop, and organize dealer sales outlets for packaged air conditioning units, year-round units, and heat pumps. Please apply only if your present position is not providing an income commensurate with your highest level of ability. All replies strictly confidential. Submit full details of your qualifications, experience, present remuneration, and a recent photograph. All applications from men with high level experience will be answered. Address replies to Mark E. Mooney, TYPHOON AIR CONDITIONING CO., INC., 794 Union Street, Brooklyn 15, New York.

NATIONAL CHAIN store sales representative to sell new super merchandiser line of commercial refrigerators to the chains. Good salary and incentive plan to capable man. Contact WARREN REFRIGERATORS, Box 1486, Atlanta 1, Georgia.

REFRIGERATION ENGINEERS: Opening with nationally-known refrigeration manufacturer. Hermetic compressor design experience necessary. Jobs are located out of town, with a progressive, long-established firm, well known in the industry. Send resume with small photo. Confidences fully respected. Our employees know of these openings. BOX 4364, Air Conditioning & Refrigeration News.

SALES ENGINEERS—We need men with experience in application, estimating, and selling refrigeration and air conditioning equipment. We want men who are now doing a good job, but who would prefer to work in Columbus, Ohio. Submit resume of experience and references. BOX 4376, Air Conditioning & Refrigeration News.

SEVERAL OPPORTUNITIES in the South for experienced, competent, and capable service managers with distributors of the leading air conditioning manufacturer. Give experience, age, and salary expected. Reply to BOX 4386, Air Conditioning & Refrigeration News.

SERVICE MANAGER: A Detroit mechanical contractor, specializing in commercial and industrial heating and air conditioning, has opening for man with field and supervisory experience to direct servicemen and select materials for installation. BOX 4387, Air Conditioning & Refrigeration News.

SERVICE MANAGER, South Florida firm on Florida West Coast, established seven years in commercial refrigeration and air conditioning, has opening for qualified service manager. Must have field, shop, and application experience. Must be capable of efficient supervision of service personnel. BOX 4388, Air Conditioning & Refrigeration News.

COMMERCIAL REFRIGERATION mechanic. Steady, year-round work for a man who is thoroughly experienced, reliable, able to use own initiative, and to hold customers, who desires to locate permanently in central Florida. Address full particulars to BOX 4389, Air Conditioning & Refrigeration News.

ENGINEER-AIR CONDITIONING. Graduate, for development and production of room coolers. Hermetic systems and capillary experience necessary. Excellent chance for young engineer with good experience. Salary open. Location N.Y.C. BOX 4390, Air Conditioning & Refrigeration News.

EQUIPMENT WANTED

CHRYSLER AIRTEMP compressor bodies needed for reoperation process. Top prices paid and we pay freight. Convert your old or junked units into cash. Give serial and model numbers. A. S. JOHNSON COMPANY, INC., 1240 9th Street, N. W., Washington 1, D. C.

EQUIPMENT FOR SALE

BRAND-NEW GENERAL ELECTRIC and Copeland open-type compressor bodies at tremendous savings. All twin-cylinder pumps with flywheel and service valve. 1/2 H.P. only \$42.00. 1-HP \$47.00. 10% discount in lots of six. Also General Electric latest model fan-cooled hermetic units. 1/2 HP at \$34.00. 1 HP at \$37.00. Completely-assembled home refrigerator kits, consisting of 1/2 HP Tecumseh unit, evaporator and capillary, only \$40.00. All equipment new, all guaranteed, all priced below manufacturer's cost. MANN REFRIGERATION SUPPLY CO., 440 Lafayette St., New York City, or phone GRamercy 8-6000.

FOR SALE: Three 60-ton York Freon compressors, model #D7 with 60 hp. 440 V motors, condensers, and controls. Please contact NORGE APPLIANCE SERVICE DEPARTMENT, Borg-Warner Corporation, 2960 Lakeshore Drive, Muskegon, Michigan.

ATTENTION SERVICEMEN — Send for our 1953 Catalog. Relays, expansion valves, controls, dehydrators, V belts, open & hermetic units. All new merchandise at great savings up to 50%. Sold on Money Back Guarantee. WALTER W. STARR REFRIGERATION, 2633 Lincoln Ave., Chicago 13, Illinois.

FRANCHISES AVAILABLE

MANUFACTURER'S REPRESENTATIVES territories available for nationally advertised walk-in coolers, cold storage doors, and display cases. Manufacturing plant located in the Middle West. Write BOX 4384, Air Conditioning & Refrigeration News.

BUSINESS OPPORTUNITIES

TO SETTLE estate: Profitable wholesale and retail washer parts and appliance business, with outstanding service contracting department. Located in Florida's largest trading area. Will keep accounts receivable and sell inventory at cost. Purchase agreement can be arranged for approximately \$5,000.00. Address replies to 3714 SAN PEDRO, Tampa, Florida.

SACRIFICE: HOUSEHOLD refrigeration service and sales of reconditioned refrigerators. Completely equipped for hermetics, lathe, external and internal grinders, 400 amp. Lincoln welder, gas torches, drill presses, electric ovens, hydraulic press, steam boiler, pumps, grinders, hot tanks, shop tools, truck, and office equipment. Rent shop 40 by 80. Four or more experienced mechanics busy year-round. Same name and owner for 22 years in lucky, rich, Long Beach, California. Trade area population within 20 miles over a million. Parts inventory at cost. \$5,000.00 cash will handle. L. K. Willis, owner, retiring. WILLIS REFRIGERATION SERVICE, 1110 E. Broadway, Long Beach 3, California.

FOR SALE: Appliance sales and service, including commercial refrigeration service. Near Gary, Indiana. Selling the best brands of home appliances, refrigerators, TV, air conditioners, deep freezers, and ranges. Yearly income, \$40,000. Modern building and real estate with a beautiful display room. Business is large enough for partners. Owner forced to sell due to ill health. Total price, \$60,000.00. BOX 4385, Air Conditioning & Refrigeration News.

FOR SALE—Well-established commercial refrigeration doing very large volume of business. Have Frigidaire franchise, also sole distributor of Electro Freeze Ice Cream Machine for the state of California. Located in Lynwood, a suburb of Los Angeles, California. Will sell building or complete business. Real bargain. BOX 4391, Air Conditioning & Refrigeration News.

MISCELLANEOUS

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Distribution Costs Slow Frozen Food Growth

(Concluded from Page 1, Column 4) the pooling of purchases and availability of bulk zero storage space in locker plants. Results were based on 1,350 questionnaires returned from the locker operators.

Mann and Wilkins found that about 72% of the commercial frozen food sold by these locker plants is sold at retail to locker patrons, home freezer owners, and other individuals, while 28% is sold at wholesale.

"Until a few years ago, practically all the frozen food handled by locker plants was sold at retail," they said. "The recent development of wholesale frozen food business by locker plants may prove to be an important factor in reducing costs and improving efficiency in the distribution of frozen foods."

"Plants with small sales volume had little wholesale business. Only in plants with over \$50,000 in total sales was the wholesale volume important."

"Most of the commercial frozen foods sold by locker plants is in consumer size packages. Yet, a significant amount (15%) was sold in institutional size packages. Locker operators are attempting to satisfy the demand of many frozen food consumers for lower prices by handling frozen foods in the less expensive institutional package. With the increasing use of home freezers there

is a much better opportunity for housewives to use larger size packages.

"Three-fourths of all plants selling frozen foods had refrigerated sales cabinets, while one-fourth of the plants sold commercial frozen foods directly from their freezer or bulk zero storage. Of the plants with sales cabinets, 81% had display cabinets and 19% were of the non-display type.

"Only 70% of the plants selling commercial frozen foods in the North Central region have any type of sales cabinet compared with about 81% for the rest of the country. Display cabinets are found most frequently in the Mountain and Pacific regions and least frequently in the North Central and South Central regions of the country.

"As would be expected, the plants with the largest retail sales volume on the average had the largest display cabinets. Those with display cabinets under 10 cu. ft. had average retail sales of \$2,531.

"Plants with display cabinets between 10 and 19 cu. ft. averaged \$3,291, while those with cabinets between 20 and 29 cu. ft. averaged \$5,872 in retail sales. Plants with display cabinets totaling more than 30 cu. ft. had average retail sales of \$12,109.

"Sixty-two percent of the locker plants selling frozen food reported bulk zero storage in their plants. Bulk zero storage was found most frequently in the North Atlantic and Pacific regions and least frequently in the North Central and Mountain regions.

"Excluding the North Central region about 28% of the plants have bulk zero storage space of more than 2,000 cu. ft. each. Approximately 7% of them have more than 10,000 cu. ft. each.

"Plants in towns of over 5,000 population reported the greatest amount of bulk storage. The fact that many locker plants have bulk zero space offers possibilities for storing and distributing frozen foods to retailers and others in their trade territory.

"Many locker plants offer discounts from retail prices on a single purchase of 12 or more packages of commercial frozen foods. It is a method of building volume with locker renters and home freezer owners who have facilities for storing large quantities of frozen foods.

"The practice is generally followed throughout the country and is particularly important in the North Atlantic and Pacific regions—areas of widespread 'food plan' promotion.

"These data indicate that locker renters and home freezer owners like this method of merchandising.

"About 44% of retail sales volume of these plants was handled on a bulk basis."

Food Plan Dealers In Akron OK New Promotion Standards

AKRON, Ohio—An eight point set of standards for advertising and selling freezer-food plans was drawn up recently by the local Better Business Bureau and subscribed to by eight local food plan operators.

The new standards were published in a newspaper advertisement signed by the cooperating companies.

The eight points are ones included in most other local advertising codes. They require that the customer understand that a freezer must be purchased, that ads giving a special price for food must state the minimum quantity to be purchased to get that price, that unexplained savings claims will not be used, nor will phrases using the term "wholesale."

Government graded foods will not be offered unless actually available, while private packer brands and grades will be plainly marked and delivered as specified. Percentage savings claims will make clear what the savings apply to. Extra charges for warranty, service contract, etc., will be made in writing, and a complete itemized statement of the transaction will be left with each customer.

Church Seeks Funds for Air Conditioning System

ORLANDO, Fla.—Cathedral Church of St. Luke, Episcopal, recently staged a drive to raise 60,000 for a new heating and air conditioning plant. The one-day campaign was conducted by 125 laymen.

Clow Acquires Automatic Heating & Cooling Supply

CHICAGO — James B. Clow & Sons here, manufacturer of cast iron pressure pipes, water works fittings, and valves, and wholesalers of plumbing and heating supplies, has purchased Automatic Heating & Cooling Supply, a division of Well-McLain Co. of Chicago.

The company will continue to be known as the Automatic Heating & Cooling Supply and will become a department of the Jobbing Div. of Clow & Sons.

All personnel and inventory will be moved to the parent company's headquarters at 201-299 North Talman Ave., Chicago, effective Sept. 14.

Mooney at Typhoon--

(Concluded from Page 1, Column 3) ing the American Society of Refrigerating Engineers and the American Society of Heating & Ventilating Engineers.

He is a member of the board of directors of the Air-Conditioning & Refrigeration Institute, after having served in the same capacity with ACRMA before that organization merged with REMA to form ARI. He is president of the National Sales Executives of Maine, as well as a member of the Portland Executives Club.

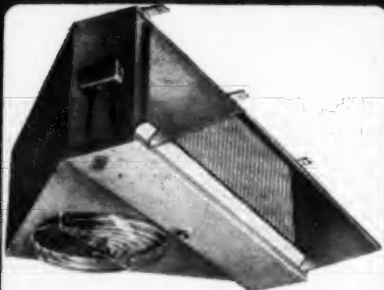
Typhoon, which specializes exclusively in the manufacture of packaged air conditioning equipment, produces commercial units from 1½ to 20 tons, combination residential heating and cooling units from 2 to 5 tons, and heat pumps from 2 to 20 tons. According to Petrone, Typhoon's sales volume for 1953 will be at least 50% greater than last year.

Manitowoc Appoints Reed Manager of Phila. Zone

MANITOWOC, Wis. — Robert M. Reed has been appointed manager of the Philadelphia zone for Manitowoc Equipment Works, according to E. E. Cole, eastern sales manager for the firm.

Reed was previously associated with Norge and RCA Air Conditioning. He will headquarter in Philadelphia and will direct Manitowoc sales activities in eastern Pennsylvania, southern New Jersey, Delaware, Maryland, District of Columbia, and Virginia.

"DEFROSTAIR" HEAT TRAP COIL



Automatically Defrosts Itself

Rising warm air is confined under hood of refrigeration coil housing within fin and tube area. Coil defrosts completely without warm air escaping into refrigerated zone.

No re-evaporation. No special plumbing. Easy to install. Low cost. Field tested since 1944. All patents granted. Defrostairstair coil is designed for all low temperature applications and fresh meat rooms below 34° F.

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- ★ **POSITIVE CONTROL SYRUP FLOW** serves 120 drinks to the gallon, each drink the same proportion of syrup and water.
- ★ **NEW, FAST-ACTING FAUCETS** for easier, speedier operation.
- ★ **PATENTED REFRIGERATED** carbonator with 90 gallon per hour water pump supplies a large volume of highly charged low temperature water.

- ★ **1/2 H. P. HERMETIC COMPRESSOR** mounted on rigid heavy duty base for quiet operation.
- ★ **ALL DRY REFRIGERATION** for both syrup and carbonated water. No unsanitary water bath.
- ★ **DUAL TEMPERATURE CONTROL** provides 28° syrup temperature in storage tanks and just above freezing carbonated water. No ice needed.
- ★ **EYE-APPEALING**, sales building appearance in your choice of red, dulux and stainless steel finishes.

With the Everfrost Soda Bar you can make nearly 3 TIMES THE PROFIT and sell more drinks every minute than you can serving bottles!

THE BOTTLE STORY

Large floor space for bottle coolers required.

You buy, store and cool 30 cases of bottles to serve 720 drinks.

THE SODA BAR STORY

An Everfrost Soda Bar requires less than 5 square feet.

720 drinks from a Soda Bar can be served from just 6 gallons of syrup.

THE BOTTLE STORY		THE SODA BAR STORY	
Average cost per bottle	5½¢	Cost of syrup per drink	1½¢
Handling, storing, icing, breakage, loss	1½¢	Cost of CO ₂ gas, electricity, water	½¢
TOTAL COST PER BOTTLE	7¢	TOTAL COST PER DRINK	2¢

30 CASES = 720 BOTTLES		30 CASES = 720 BOTTLES	
Sales—720 drinks @ 10¢	\$72.00	Sales—720 drinks @ 10¢	\$72.00
Cost of bottled drinks	\$50.40	Cost of Soda Bar drinks	14.40
YOUR PROFIT	\$21.60	NEARLY 3 TIMES THE PROFIT	\$57.60

SEE THE SODA BAR AT YOUR NEAREST EVERFROST DEALER

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